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The role of organisational resilience in maintaining long term performance, especially after undergoing major organisational changes: A consideration of the critical success factors involved.

By

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ABSTRACT

A lot has been said about change. For example, it is widely recognised that “the only constant is change” (Heraclitus, 470 BC). As such, “no sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be” (Isaac Asimov). As regards this, a bulk of existing researches have been aimed at understanding the triggers for change and the extent or degree to which individuals, organisations, systems or entities have to change. Generally, results from such studies vary. With specific relations to organisations, organisations are advised of the need to develop added adaptive and dynamic capabilities. One of such added adaptive and dynamic capabilities is organisational resilience. In the literature, organisational resilience has been successfully linked with organisations’ ability to maintain long term performance. Hence, the research is not about re-examining the relationship between organisational resilience and organisations’ ability to maintain long term performance. This research focuses on exploring the critical success factors required to maintain long term performance and building adequate resilience into systems undergoing changes. The investigation was conducted in three phases, namely: (a) the exploratory phase; (b) the descriptive phase; and the empirical phase.

The exploratory phase involved identifying the critical factors essential to maintain long term performance and at the same time build resilience into their systems after undergoing organisation-wide changes. In order to make out these critical, a pilot study was conducted. 21 persons occupying senior managerial positions in different organisations were interviewed. The interview data were transcribed, coded and analysed using coding and thematic analysis to identify five common themes, namely (a) employees’ readiness to support ongoing organisation-wide changes; (b) development of targeted organisational adaptive capacity; (c) the provision of individualised and social support; (d) the use of stress coping mechanisms; and (e) the existence of organisational resilience strategies. The second phase of the research entailed conducting case study research with the intention of describing the

identified critical success factors. The final phase entailed conducting empirical analyses and cross case analysis. Results from the cross case study analyses indicated that both resilience building at the individual level and organisational level is needed for organisations to build in resilience into their systems especially after undergoing organisation-wide changes.

Three factors (i.e. employees' readiness to support ongoing organisation-wide changes, the provision of individualised and social support and the use of stress coping mechanisms) were found to be more pronounced at the individual level. The remaining two factors namely development of targeted organisational adaptive capacity and the existence of organisational resilience strategies are essentially carried out at the organisational level. The research has contributed to the current body of knowledge on how organisations can strive to maintain long term performance, especially for a country like Nigeria where there still remains a dearth of such related studies. Each of the research hypotheses were either confirmed or non confirmed. This will give the practitioners, academicians and managers of Nigerian organisations the opportunity to understand how each of the sub factors of the five critical success factors can influence on attempts to build organisational resilience. In addition, specific actions that managers can follow over the life of an organisation-wide change project that will improve the resilience of systems undergoing change. In addition, differences in how varied control factors can influence resilience building in organisations were explored and validated based on the results of the Mann Whitney test results. At the end of the thesis, recommendations for future practice and research were made. One of such is that resilience building at both levels be done concurrently and given equal prominence.

Key Words: Organisational resilience, Organisation-wide changes; long-term performance, employees' resistance to change, case study research method, systems' recovery systems, stress coping mechanisms, organisational adaptive capacity, individualised and social support

LIST OF PLANNED PUBLICATIONS

A. Proposed conference papers

1. European Operations Management Association (EurOMA):
Exploring the critical success factors necessary for organisations to maintain long term performance especially after undergoing organisation-wide changes
2. Production and Operations Management Systems (POMS):
Towards maintaining socially responsible operations: Taking into account employees' readiness to support organisation-wide changes.
3. Industrial Engineering and Engineering Management (IEEM):
Employees' readiness to support organisation-wide changes: A major boost to successful organisation-wide changes.

B. Proposed journal papers

1. Journal of change
A study of the relationship between employees' readiness to support organisation-wide changes, provision of individualised and social support and the use of stress coping mechanisms during organisation-wide changes.
2. International Journal of Production Research
Explaining the importance of employees' readiness to support organisation-wide changes in organisations' attempt to build resilience in changing
3. Journal of African Business
A proposal on how organisations, operating in developing nations, can maintain long-term performance after transformational organisational changes: An analysis of nine Nigerian organisations.

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LIST OF EQUATIONS

$Y_i = (\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n) + \varepsilon_i$	(a)	126
$C = (A \times B \times D) > X$	(b)	296

CHAPTER 1 INTRODUCTION

1.1 Research Background

Nigeria has an estimated population of 150 million people, and so it is described as the most populous black nation (Soludo 2006). It is situated in West Africa with the Gulf coast of Guinea on the Atlantic Ocean to its southern border, Niger sharing its border to the north, the Republic of Benin to the West, and Chad and Cameroon to the east (see Figure 1). The country is made up of 36 states and the Federal Capital Territory, Abuja. Each state is governed by an elected person, and has six members (that is, 3 Senators and 3 House of Representatives) also elected to the Federal National Assembly (i.e. the Nigerian parliament). The states are further divided into what is known as Local Government Areas, each with its own elected chairman and councillors. In total, there are 774 Local Government Areas. There is a lot of diversity in Nigeria. The country is believed to have over 70 ethnic groups distributed across the 6 geographical regions of the country. Of these, the three major tribes are the Hausa, the Igbo and the Yoruba. The Hausas are predominantly found in the Northern part of the country, while both the Igbos and Yorubas are native to the south-eastern and south-western part of Nigeria respectively.

Prior to the 1970s, Nigeria was predominantly an agrarian society, but now, the mainstay of the economy is oil producing, such that Nigeria is reputed to be one of the top ten largest exporters of crude oil in the world. In 2005 a Global Economic Report listed Nigeria as one of eleven countries widely believed to possess a soaring potential for becoming one of the world's largest economies in the 21st century. Similarly, in the 2008 Annual international Monetary Fund economic assessment report on Nigeria, it was reported that Nigeria's economy is one of the fastest growing in the world; hence suggesting that the prospects for growth are good. But this might not be so, as past and present governments have tried implementing various policies but have somehow failed in their effort to sustain and continuously put the nation's economic reserves and resources to effective use (Dike 2003). A common tale told among Nigeria economy reviewers and critics, is how Malaysia in the 1960s obtained oil palm seedlings from Nigeria to start their oil palm plantations

(Banjoko 2009; Tathagata 2009). However, fifty years after, Nigeria, the once recognised key player in the palm oil industry can not earn a decent financial return in exports, whereas Malaysia has since gone ahead to consolidate its position as not only the world's major producer, but also an exporter of palm oil (Banjoko 2009). Malaysia's earnings from the oil palm industry in recent times (i.e. as at 2009) equals what accrues to Nigeria from its crude oil exports; which has been earlier noted eventually became the sole driver of the Nigeria economy (Banjoko 2009).

Figure 1: Map of Nigeria (Source: <https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html>)



A critical review of existing studies on Nigeria industries reveal that organisations operating in the country are at a crucial point, and at greater demands to improve on their efficiency, proficiency and most importantly develop adaptive capacities to withstand the unfavourable conditions or challenges they continually face (Lewis 1967; National Archives 1996). In effect, Nigeria is at a state of urgent need for

research studies that can aid its economic recovery attempts as well as help sustain success across its industries. For a country that a few analysts (Forrest 1994; Kilby 1959; Oriloye 2009) marked as showing great potentials in becoming an industrialised nation, it is believed to be unarguably and increasingly becoming incapable of achieving those potentials (Banjoko 2009; Ekeoba and Oluwadare 2009; Gabriel Osu 2008). Any study that seeks to help re-establish and re-invent organisations so as to be able to perform effectively and maintain long-term performance in major industries in Nigeria will be most needed and timely, as a substantial number of the country’s industries are fast closing down (Adeyemi 2007). See Table 2 below.

Table 1: State of manufacturing industries in Nigeria (Adeyemi, 2007)

Industries that have closed down	Ailing Industries	Industries operating at sustainable level
Chalk manufacturers	Textiles firms	Food, beverages and Tobacco sector
Candle manufacturers	Vehicle assemblers	Leather sub-sector
Dry cell and automobile batteries industries	Cable manufacturers	Household products
Shoe polish	Paint manufacturers	
Matches	Steel firms	

In the last two years (i.e. from 2009), it is said that not less than 890 organisations have left the shores of Nigeria in recent years and as such the “country is still in the woods” (e.g. Oriloye 2009). As a result, it is estimated that revenue from the non-oil export business in the first quarter of the year 2009 dropped by \$104 million against that which was achieved in the first quarter of year 2008 (Ekeoba and Oluwadare 2009). Because of this, Nigeria is on one hand believed to be losing \$5.7 billion yearly to untapped opportunities in neighbouring West African markets, and on the other hand has most likely lost over \$20 billion as a direct effect of organisations leaving Nigeria for neighbouring West African countries (Adiorho 2009; Ekeoba and Oluwadare 2009; Oriloye 2009). Unfortunately, more relevant and necessary data on individual industries remains unavailable (Mustapha et al. 2009).

As it would be expected, many have queried and criticised the derogatory role played by the Nigerian government in past years for making most of the Nigerian industries redundant. Nwokah and Ahiauzu (2008) recommended that the Nigerian government should endeavour to provide a stable economy that will augment business development in the country. Several other commentators (Crusoe and Onwuka 2009; Okafor 2008b; Oluseyi et al.) have dwelled on numerous national-level factors that undoubtedly contribute to most of the perturbing occurrences experienced by organisations. In line with Anugwom's (2007) explanation, these factors can be broadly classified under technology, economic, demographic, professional and organisational challenges. This research does not however focus on these challenges at the national level. One of the reasons for this is because a large percentage of previously established national-level issues are not peculiar to Nigeria (as shown in the Economic Commission for Africa 2001 report). As such, this study seeks to unearth and validate enterprise-level factors (consult similar examinations done by Egbetokun et al. 2009; Eti et al. 2006; Forrest 1994 for an overview) that play critical role in enhancing organisations' ability to sustain long-term performance across all Nigerian industries. Yet, in no way during the study would any referable national-level factor be downplayed.

A few analysts, such as the likes of Wright (1986) and Nnoli (Nnoli 1993), debate that any measure of development directed at reviving the Nigeria's crisis-ridden economy would not stand the test of time unless such measure addresses the false foundations on which the proposed developments are laid upon. This in itself is representative of the belief that Nigeria's economy can only truly attain self-reliance and sufficiency if it is diversified by opening up the private sector and once again endeavouring to make Nigeria a major player in exportation of its home-made goods and services (Nnoli 1993). Thereby one thing is eminent: Nigeria must focus on developing its non-oil based industries (Okonjo-Iweala and Osafo-Kwaako 2007). This means that Nigeria cannot continue to rely on oil exportation or, better stated, remain an entirely single export driven nation. It must diversify and at the same time develop other mainstream industries. In Ross (2003) words, "if the export sector were more diversified the economy would be less affected by fluctuations in

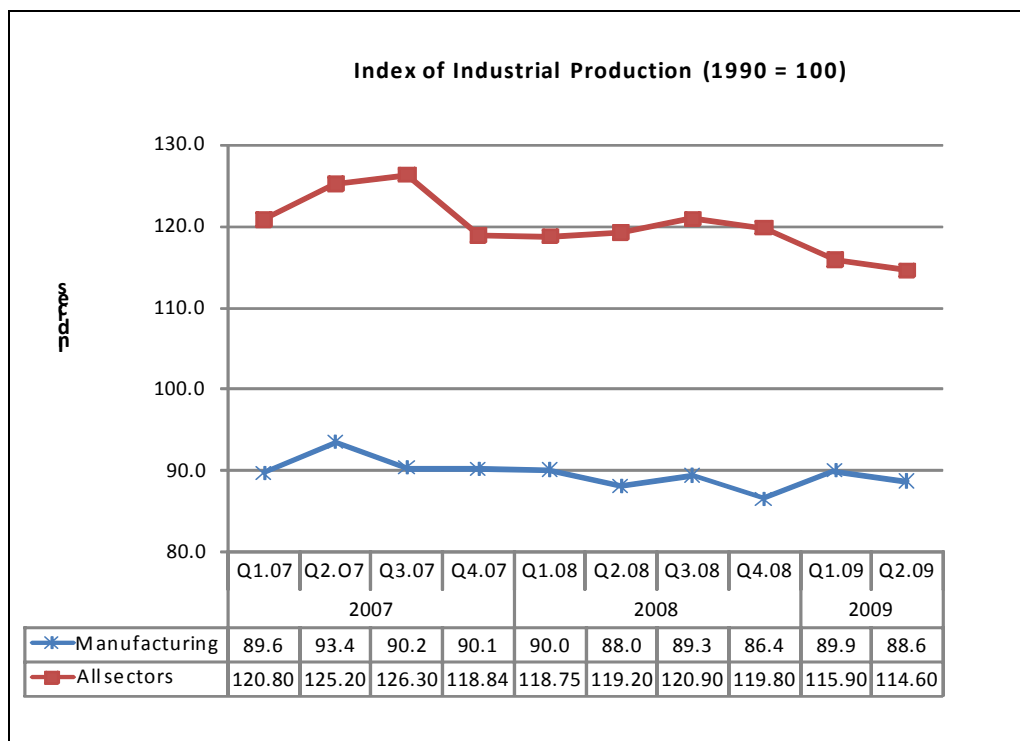
international markets... As the non-sectors grow, the dependence of the government and economy on the oil sector will diminish”.

In line with the observation of Collins and Porras (2004) at the turn of the century that the majority of organisations that had previously established themselves as being highly successful were finding it more challenging to maintain consistent and continual long-term performance, there are reputable cases to show that the Nigerian case is no better. On May 14th 2009, the Nigerian Stock Exchange delisted nine moribund companies. One of the companies, Footwear and Accessories Plc (FAMAD), had been in operation in the leather sub-sector in Nigeria since 1932 and was once regarded as a highly thriving company (Eboh 2009). Regrettably, this seems to be the trend in most Nigerian industries. The graph in Figure 2 shows that from 2007 to 2009, there was a steady fall in industrial production in all sectors in Nigeria. In order to prevent this from continuing to happen, organisations operating in the country must therefore explore avenues and techniques through which they can maintain long-term performance and at the same time build up some degree of buffer that will enable them to retain pre-crisis operational performance.

Quite a number of scholars have carried out comprehensive studies on a significant number of Nigerian industries by focussing on globalisation and industrial performance (e.g. Onyeonoru 2003), managerial competencies as they influence marketing effectiveness in corporate organisations (Nwokah and Ahiauzu 2008), the relation of firm size to profitability (Inanga and Soyibo 1982; Iyiegbuniwe 1988), issues and problems in productivity in Nigeria (Udo-Aka 1983), as well as in the petrochemical industry (Lilly et al. 2007) and agriculture (Chukwuji et al. 2006). Studies targeted at the manufacturing sector have examined ways through which manufacturing organisations can improve their productivity (Anyanwu 2000; Mustapha et al. 2009) particularly after policy adjustments (Akinlo 1996), the cost of deficient infrastructure to manufacturing organisations (Lee 1992) and the advantages of growing the sector through the use of science and technology (Ilori et al. 2002). After conducting a study in selected food companies in Nigeria, Ilori et al. (2002) stated that despite the high stakes involved, new product development activities have been adopted as strategic options for enhancing the corporate

viability of their studied organisations' businesses, mostly in their respective dynamic and increasingly competitive markets. In another study, it was emphasised that effective communication and encouragement of shared values of organisations among their members will enable them to understand, appreciate and cultivate positive behaviours that can influence such organisations' performance (Okafor 2008a). Oluleye and Olajire (2001) proffer that organisations operating in developing countries, such as Nigeria, must continuously endeavour to improve productivity in order to increase profitability on a long-term basis.

Figure 2: Steady decline in industrial production in all sectors in Nigeria



(The data used in plotting the graph was extracted from Central Bank of Nigeria's Economic Quarterly Reports)

An industry-wide survey by Egbetokun et al. (2009), and Olufemi and Caliskan (2009), indicated that innovation is being used by organisations in Nigeria to tackle the problem of productivity. Eti et al. (2006) affirm that, in Nigeria, a good understanding of the comparable culture, support processes, work structuring and general management policies will enable organisations that have significant

investments in physical assets to implement wise-strategic maintenance schedules. Their argument is that the single maintenance policy that is currently adopted by Nigerian organisations cannot adequately contain all breakdowns or restore plant to its full operating capability. In furtherance, they advised that maintenance strategy should cover proposals for the following essentials: maintenance organisation and management, measures of effectiveness, work control, maintenance-management information system, personnel records regarding competencies, technical documentation, logistic support, maintenance tasks and maintenance engineering. As such, identifying trends in relation to enhancing organisations' ability to maintain "long-term corporate economic health in Nigerian industries" (Eti et al. 2006) will be of significant importance in the broader context; ideally in policy making (Ajayi and Osafao-Kwaako 2007) and then, in other aspects.

1.2 The Research context

The investigation of resilience constructs is not entirely a new concept as it has been extensively researched in the field of Psychology (Buikstra et al. 2010). These typical researches usually fall under three research orientations. The first research orientation attempts to define and explain resilience of individuals (Jacelon 1997; Seville 2008; Waugh et al. 2008). The second research orientation builds on the first orientation and advances resilience-based studies by developing typologies and constructs of what makes individuals resilient (Buikstra et al. 2010; Luthar et al. 2000a; Luthar and Cicchetti 2010). The third, and last, research orientation examines and focuses on proposing how individuals can become resilient based on similarities and differences of the researchers' observations (Lengnick-Hall et al. 2010; McCann and Lee 2009; Totterdill 2010). Collectively, these three orientations have served as a baseline for relating and understanding resilience on a broader context. In the last decade, there has been an increase in the number of researchers investigating resilience in relation to organisational systems (Bhamra and Burnard 2010; Burnard 2010; McCann 2004; McManus et al. 2008; Ponomarov and Holcomb 2009; Sheffi 2005b). This is because it is widely regarded as a functional construct that can help organisations recover and return to normalcy within a shorter period of time after undergoing major disruptions (Gittell et al. 2006; McCann and Lee 2009; Norris et al.

2008). Similarly, in this study, resilience-building is attributed to be disaster containment or control strategy adopted by organisations in order to provide for immediate solutions that will enable them, post crisis, retain core competences or functionalities needed to keep them operational. As such, a resilient organisation herein this study is taken as an organisation that has over time developed active tendencies required to effectively and successfully deploy both its human and non-human resources towards quickly reconstituting itself within the shortest possible time so as to remain operational at a functional level to the fullest possible extent after undergoing major disruptions.

With this in mind, organisations need to adequately prepare for impact of disruptive events by determining both the delayed and full impact of potential disruptive events while also devising self-recovery approaches well ahead before disruptive events occur (Sheffi 2005b; Sheffi and Rice 2005). This is however not an easy task as organisations constantly undergo organisational changes in response to adapting to their changing business environments. The pace in which the business conditions organisations once successfully operated in is dramatically increasing at a record rate (Antioco 2011; Collins and Porras 2004). Traditionally, the idea of organisations surviving in highly turbulent and ever-changing business environment rests on the notion that organisations must be flexible, lean and reactive (Bhasin and Burcher 2006; Simpler and Koenigsaecker 2009; Womack and Jones 1996). Just as Ansoff (1990) and Staber and Sydow (2002) indicated, the objective is more or less an attempt to find an optimal fit between strategy-structure. That is, understanding what strategy organisations can use to configure their resources so as to effectively operate and respond to unanticipated changes in turbulent environments. Although this has proved to be worthwhile, an offshoot alternative to this conventional approach is being proposed.

This substitute approach lays emphasis on the need for organisations to be proactive and agile (Timmer 2007). As such, organisations are advised to continuously develop, explore uncharted frontiers and apply new knowledge that is sustainable but difficult for their competitors to imitate (Chakravarthy 1982; Oliver 1991). Hence, organisations looking for how well to cope or deal with both externally-driven and

internally-oriented unexpected changes must devise methods through which they can develop adequate adaptive capacity (Chakravarthy 1982; Dalziell and McManus 2004; McManus et al. 2008) towards becoming resilient (Dalziell and McManus 2004; McManus et al. 2007; McManus et al. 2008). Meanwhile, organisational resilience has been found to be more practical and less risky, to develop from the onset of an organisation-wide change than introducing interventions to create resilient systems midway through the change (Luthar et al. 2000a). Sadly, no research study has attempted to explore how organisation can develop resilient organisations from the onset of an organisation-wide change. This is specifically what this research intends to achieve.

1.3 Research objectives

This research will contribute to the body of knowledge by

- i. Identifying and describing enterprise-level factors that would enhance organisations' resilience building capabilities particularly after organisation-wide changes.
- ii. Specifying actions that managers can follow over the life of an organisation-wide change project that will improve the resilience of systems undergoing change.

1.4 Research questions

From the outlined objectives in Section 1.3, the following research questions are formulated:

- i. In Nigeria, out of the enterprise factors that will be identified from the first objective stated above, which of these factors would enhance organisations' ability of becoming resilient and which ones would increase organisations chances of maintaining long-term performance particularly after undergoing organisation-wide changes at both the individual and organisation levels?

- ii. Would any of the enterprise-level factors, identified in question i, differ across organisations' ownership, size of organisations, types of organisation or types of industries i.e. across publicly or privately-owned organisations, technologically-driven organisations or service-oriented organisations and oil and gas or non oil and Gas industries?

1.5 The research assumptions

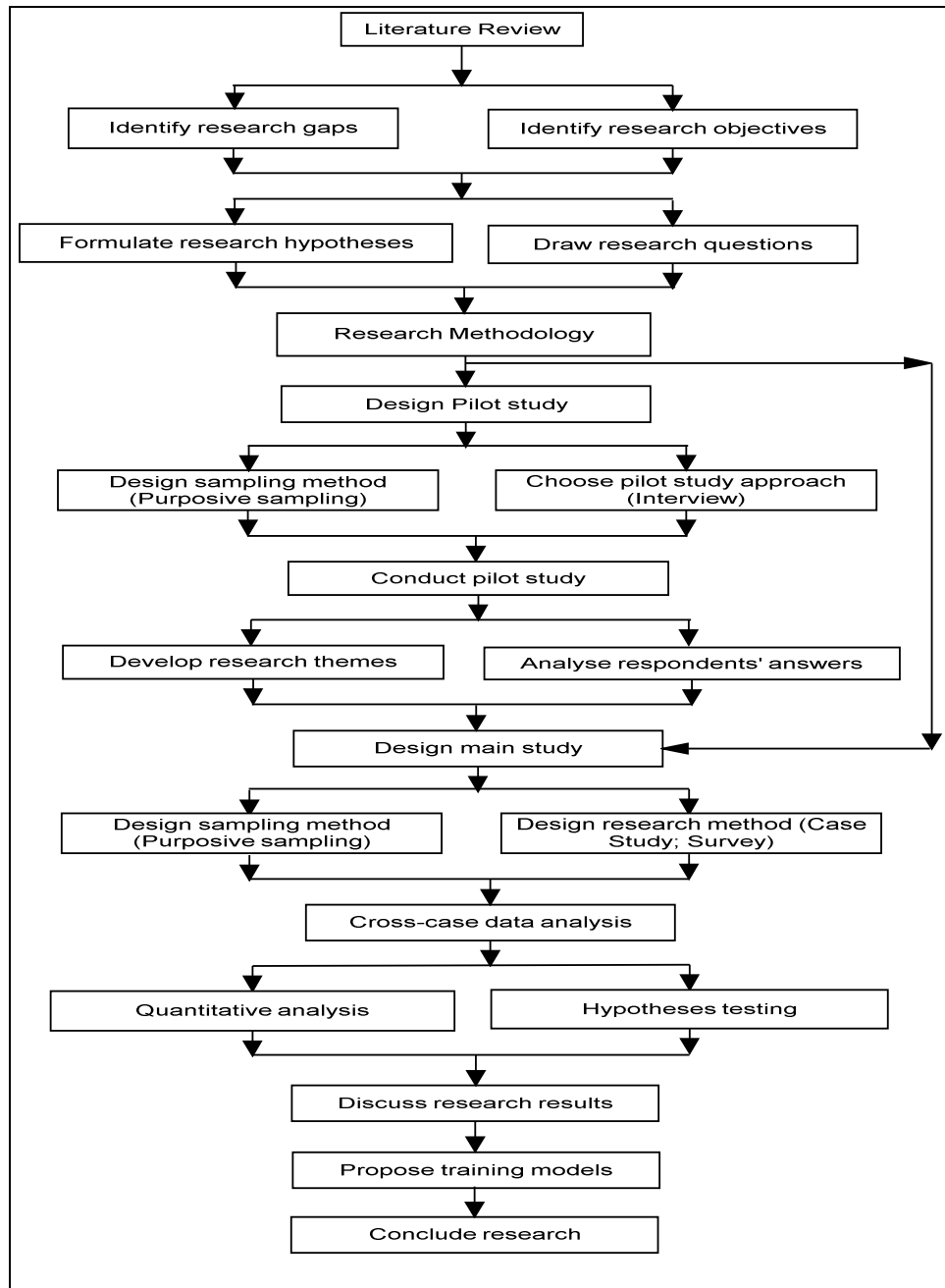
At the start of the research, the following assumptions were adopted as reference baselines in this study:

- i. Resilience-building will contribute to enhancing Nigerian organisations' ability to maintain long-term corporate success, which in return, in the longer frame of time, has a high probability of contributing to the successful development of Nigeria' non-oil industries. In addition, private sector growth is crucial to the development of a Nation's economic development.
- ii. Resilience at the individual levels is a composite of resilience building at the organisational level. As such, especially after undergoing organisation-wide changes, resilience building at the organisational level is significantly dependent on the organisation's member's mental toughness, strengths and ability to adjust and adapt to the aftermath effect of the organisation-wide change (Seligman 2011).
- iii. The consequences of a failed organisation-wide change no matter how small it is have the potential of degenerating into a catastrophic event if ignored and allowed to accumulate. Thereby, key to building organisational resilience entails seeking to understand the root cause for deviations observed and timely intervention (Tinsley et al. 2011).

1.6 The research process

The adopted research process is presented in Figure 3.

Figure 3: The research process



1.7 Originality of the research

Literarily, originality can be expressed in the following ways: (a) a researcher conducting a study that has never been done before; and (b) the researcher's

contributions to existing knowledge. From the first viewpoint, originality indirectly focuses on two elements, namely: creativity and innovation. According to Sternberg and Lubart (1999), creativity is the ability to produce work that is both novel (i.e. original, unexpected) and appropriate (i.e. useful, adaptive concerning task constraints). Based on Schroeder et al. (1989), innovation can be taken to be: (i.) the generation, evaluation and implementation of new ideas to meet the research objectives; (ii.) application of new or different approaches or methods or technologies resulting in improved quality of an existing theory; and (iii.) challenging the status quo, identifying opportunities and implementing non-obvious, significant changes that meet or exceed the objectives of the case in point. From these concise explanations of creativity and innovation, two things are eminent.

- i. Both creativity and innovation processes have the prospect of altering and/or impacting on the manner in which things, phenomena or objects are ordered or performed or perceived.
- ii. Both creativity and innovation can be ascribed to be a process through which:
 - (a) an entirely new theory or product or interpretation or analysis is generated out of something that has never happened before as well;
 - (b) an existing theory or research approach or phenomenon is critically reviewed in a different fashion and at the end, the findings either supports existing theories, interpretations and analysis or new sets of hypotheses are developed;
 - or (c) an observed procedure or model used elsewhere is newly adopted in a completely new field, setting or context.

In suit of the second viewpoint, originality can also be claimed in relation to contributions to the body of knowledge. In other words, originality is achieved when the study's results and/or findings have the prospect of substantially refining existing protocols in a positive manner and by improved conduct. In such instances, the results and findings would simply contribute by expanding the knowledge frontier of the body of knowledge under review. Thereby, originality of this research study is reflected in relation to its contribution to the body of knowledge.

Notably, there are a considerable number of reports and/or studies on Nigeria. Many of these studies (for example, Adeyemi 2007; Berger 1975; Dabo 2006; Edoho 2001;

Falola 1996; Lewis 1967; Oluleye and Olajire 2001), though each with a different research focus, make efforts to build a case as to why the study is necessary by firstly giving an overview of Nigeria. For each of these authors, and from the researcher's experience, a research background is used as a preliminary platform not only for justifying the study but to give a detailed summary of challenges that might hinder the investigations but also to argue the prospect of generalising the subsequent research studies and/or findings. For instance, Lewis (1967) described the past and present policies of Nigeria to drive in the author's reasons for Nigerian's declining growth; Berger (1975); Falola (1996) toiled the same line of reasoning. While Falola's research focus was to highlight the problems of poor policy making and implementations; Berger (1975) sought to highlight it from the angle of policies being used as a tool for industrialisation; Dabo (2006) used a similar approach to try to link the problem of Small and Medium enterprises inability to secure the loans they need from commercial banks as a condition for an alternate banking system – Islamic banking. Hence, although some research studies might all start with a detailed summary of the Nigeria's history, values and policies, the uniqueness of each of these studies on Nigeria usually finish at a point where each of the respective researcher starts to narrow down on his/her own research focus and study.

In this current study, the originality and uniqueness bothers on the fact that the concept of organisational resilience has not been investigated in Nigeria in relation to any aspect, segment or sector in Nigeria. Hence, resilience building is significantly recounted as an indicator of individuals, groups or organisations' ability to withstand and recover from unexpected and unfavourable incidence (Gittel et al. 2006; Vogus and Sutcliffe 2007). In suit of this, a critical appraisal of how established high-performing Nigerians organisations operate is taken as an excellent source for explaining the interrelationship and role that organisational resilience plays in organisational ability to maintain long-term performance. One other reason that plays up the uniqueness of this study is that previous studies on Nigeria that have not explored the concept that Nigeria can truly attain sustainable development if and when Nigerian organisations are able develop enterprise capabilities required to maintain long-term performance. The implication of the logical causal connection is

that the more organisations are able to maintain long-term performance, the more the income that will be generated by the sector, which will directly bolster the sector's revenue generation powers and, in the long run, help the government attain its goals. Moreover, it is the researcher's belief that the need to diversify the industrial sector of Nigeria can only be achieved when organisations operate at a self-sustaining level of long-term performance.

1.8 Research contributions to knowledge

This research has contributed to body of knowledge as follows:

- i. Analysis from the pilot study suggests that highly complex organisations-wide changes are difficult to implement in business conditions ascribed to have high degree of uncertainty than less complex organisation-wide changes implemented in less uncertain business conditions.
- ii. This research provides further credence to the proposition conjecture that accumulative resilience of organisational members further enhances organisations' chances of becoming resilient.
- iii. Resilience building at the organisational level has been empirically related to resilience building at the individual level. Three factors namely (a) employees' readiness to support organisation-wide changes, (b) employees' use of stress coping mechanisms and (c) the provision of individualised and social support to employees were found to be enablers for building in resilience at the individual level while the development of targeted human development organisational adaptive capabilities and the existence of organisational resilience strategies are important for building in resilience at the organisational level.
- iv. The study identifies that management of employees' resistance and the need to cultivate a learning culture in organisations remain vital factors for achieving successful implementation of organisation-wide changes. These two factors also contribute to organisations' ability to sustain derived benefits of such changes.

- v. Employees' readiness to fully participate or support organisation-wide changes has been established as a key factor in building resilience into systems after implementing organisation-wide changes.
- vi. Evidence from this study indicate that organisations' intents for implementing organisation-wide change can be broadly classified into four, namely: (a) organisations that are forced to undergo changes, (b) organisations whose reason to change is because they saw it work in other similar organisations and so they embarked on implementing like changes, (c) organisations that did ample research, realised its potentials and thereafter implemented it and (d) organisations that have already implemented organisation-wide changes but are only carrying out remedial actions. Furthermore, it is revealed in this study that organisations' chances of successfully implementing organisation-wide changes increases if the organisation-wide change is well-researched and properly planned.
- vii. As regards Nigeria, since no work has previously been done on how organisations can develop resilience focussed capabilities, this study provides a reference guide on actions that organisation leaders can adopt in order to build resilience into their changing or changed systems.
- viii. Just as Markins and Steele (2005), Collins and Porras (2004) and Covington (2002) observed in their study, this study also discovered those organisations' changes successes are difficult to sustain. In addition to this, it is further observed that continuous organisation-wide types of changes are more prone to failure than one-off organisation-wide changes.
- ix. The research offers Change Management consultants a reactive approach through which organisations can recover from planned organisation-wide changes that in the end turned disruptive.

2.1 Chapter Outline

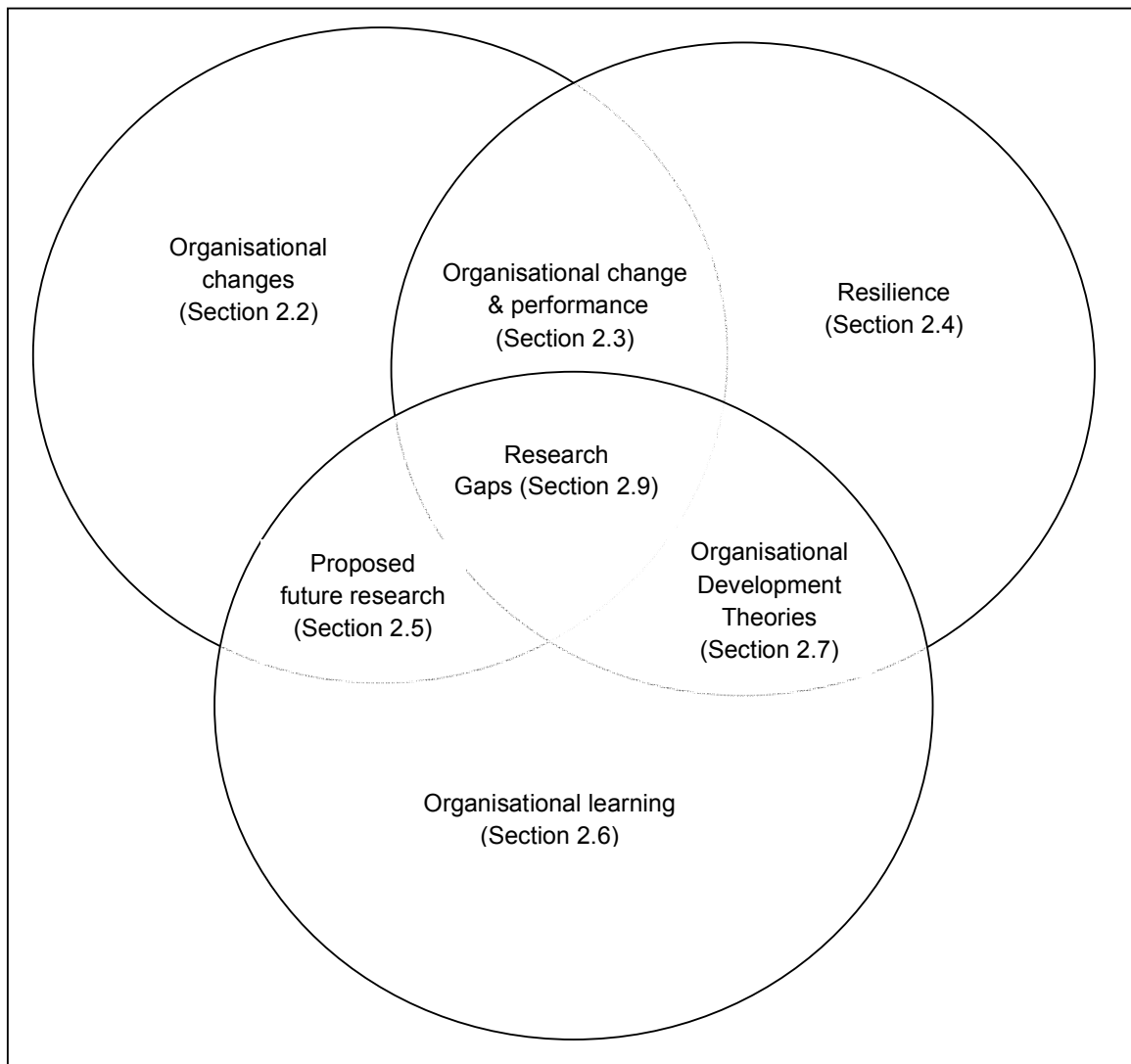
The process of reviewing existing literature regarding researchers' areas of interest is a daunting task that needs to be carefully planned out. As such, Rudestam and Newton (2007) suggested the use of a Venn diagram for demarcating specific knowledge areas relevant to the study and narrowing down on the research gaps. According to the authors, the uncorrelated section of each circle in the Venn diagram would represent distinct knowledge areas considered in a study and thus would typically consist of literature intended to give readers background knowledge to each of the specific knowledge areas under consideration. However, the intersection between two knowledge areas would represent applicable literature underlying important associations between the knowledge areas. In other words, the overlapping areas in the Venn diagram present admissible concepts or theories of how the knowledge areas relate. More often than not, the research gaps are found in the region where all the knowledge areas overlap (Rudestam and Newton 2007). This approach was adopted in this chapter.

As shown in Figure 4, three broad knowledge areas, namely: (a) organisational changes; (b) resilience and (c) knowledge management were considered. In Section 2.2, basic concepts of organisational changes are described. More emphasis is placed on the role of individuals during and after the changes and the changes' impact on affected individuals. As a follow up to this, a variety of employees' behaviour is described. This aspect is considered necessary when discussing organisational changes because an organisational change can only truly achieve success in their attempts to change when the individuals in the organisation change as well (Balogun et al. 2004a). Implications of organisational change failures are discussed also. Section 2.3 presents an evaluation of the relationship between organisational changes and organisational performance. It is highlighted in this section that unsuccessful organisational changes can end up being disastrous to organisations. As such organisations have to build in some degree of resilience into their systems. Hence, the idea of resilience, resilience building and common

constructs used to explain resilience is presented under Section 2.4. A brief illustration of the different contexts across various disciplines from which resilience is generally discussed is presented. This is used as a prelude to understanding the advantages and enabling capabilities of resilient societies, individuals or organisations. The concepts and terms of organisational resilience are discussed expansively. Common constructs used in explaining organisational resilience's components, (and relationships of these components with resilience), are added.

Thereafter, a suggestion of future research directions for resilience-based studies is presented in Section 2.5. Commonly, it is said that resilience-based studies should bring to fore the importance of building organisational resilience through strategic human resource management (Hamel and Valikangas 2003; Hamel and Prahalad 2005; Lengnick-Hall et al. 2010; Luthans et al. 2006; Youssef and Luthans 2005). For organisations to be able to build competitive organisational adaptive capacity, senior management must encourage the notion of learning from failures (Edmondson 2011). In the following subsection, organisational learning is explained. Organisational learning was explored in relation to tacit and explicit knowledge in Section 2.6. In section 2.7, an argument of how two types of organisation theories (i.e. systems theory and chaos theory) can offer a better understanding of resilience is presented. Under Sections 2.8, this study's research gaps are discussed. This section presents clear summary of yet-to-be explored overlapping relationships of the knowledge areas considered in this study. In Section 2.9, the research hypotheses are listed. A surmise of the chapter and a brief introduction to the next chapter are presented in Section 2.10.

Figure 4: Venn diagram showing the relevant literature considered



2.2 Organisational changes

Organisation-wide changes are either planned or unplanned (Beckhard 2006; Blake and Bush 2009; Mintzberg and Waters 1985; Romanelli 1991; Senior and Fleming 2006; Weber and Manning 2001). In an instance where the organisation-wide change is unplanned, it is described as emergent (Burnes 2004a; Senior and Fleming 2006; Weber and Manning 2001). On the other hand, planned organisation-wide changes are deliberate strategic interventions undertaken by management (Burnes 2004a; Greiner and Bhambri 1989; Mintzberg and Waters 1985). As regards

planned intervention changes, top managers are portrayed to have diligently outlined the scope and intent of the change initiatives while with unplanned changes, they are usually as a result of unpredictable surprises or opportunities (Ansoff and McDonnell 1990; Pettigrew and Whipp 1993). That is to say, unplanned changes are a product of unexpected and unintentional endeavours, reasoning and actions by change agents (Burnes 2004a; Dunphy 1996).

In addition, one major difference between planned and unplanned organisation-wide changes, is that from a planned change context it is assumed that the business environment and the associated change management concepts are to a significant degree known (Senior and Fleming 2006; Wilson 1992). Moreover, during planned changes, managers' system of thinking is expected to be one having a clear view of what to achieve, when to achieve it and how to achieve it (Wilson 1992). Whereas, from an unplanned organisational change context, the business environment and the associating change management concepts are relatively unknown when compared with that of planned organisation-wide changes. Hence, more often than not, research studies are more on planned changes than unplanned changes (Balogun et al. 2004b; Meyer and Stensaker 2006; Orgland and Krogh 1998; van Dam et al. 2008).

2.2.1 Change process types

Organisational changes can either be in the form of social or technical changes (Institution of Production Engineers 1980; Tushman et al. 1986). A purely technical organisational change is a "bit-by-bit, cumulative process until it is punctuated by a major advance" (Tushman and Anderson 1986). According to Tushman and Anderson (1986), technological changes can either be product or process based. Examples of product based technological changes include automobiles and airlines design changes while process-based technological changes include process substitution – for example, the implementation of a new enterprise resource planning (ERP) system. Hence, it is technologically-driven in nature, and examples include machine or component upgrades, while a socially-oriented organisational change is one that necessitates change agents to apply their existing knowledge base in a

systematic manner to problems requiring analytical solutions (Paton and McCalman 2008).

Depending on the success of technologically-based or socially-based changes, the change's outcome can either be competence-enhancing or competence-destroying (Tushman and Anderson 1986). Competence-enhancing technological changes are small incremental changes that would normally increase the efficiency of a given product, process, organisation or an individual over a period of time, while competence-destroying changes are often large organisational changes that are "so fundamentally different from previously dominant technologies" (Tushman and Anderson 1986). In addition to classification based on technological and social changes, organizational changes can also be small or large scale organizational changes. In Orgland's (1997) model, the contrast between small scale and large scale organisational changes was explored. The author explained that small scale organisational changes have a narrow degree of involvement (or pervasiveness), are not complex and the depth of impact that the change creates is shallow, but large scale organisational changes were declared to be quite complex, deep and require organisational-wide involvement of stakeholders. See Table 2 for the comparisons.

Table 2: Change types (Orgland 1997)

Small scale				Large Scale
Shallow	←	Depth	→	Deep
Narrow	←	Pervasiveness	→	Wide
Simple	←	Complexity	→	Complex

Generally, planned organisation-wide change types can be defined in terms of two dimensions (Balogun et al. 2004a). The first dimension, which is the end result of changes, highlights the extent of the desired change, while the second change explains the nature of the change (Balogun et al. 2004a). According to Hailey and Balogun (2004a), organisation-wide changes based on the extent of the change's end result involve transforming an organisation or realigning aspects of an

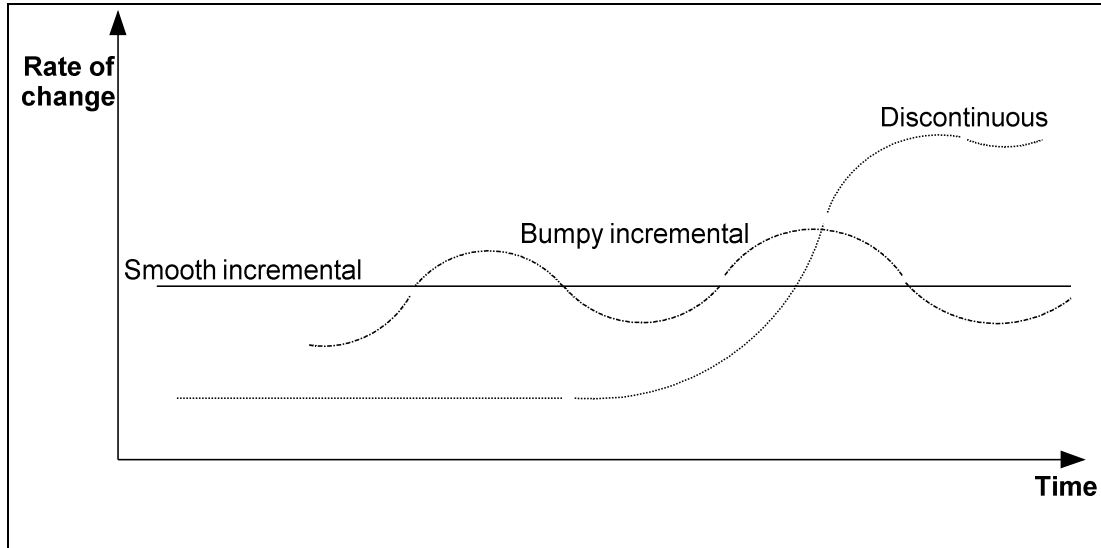
organisation. Transformational changes are mainly deep-seated alterations that would typically require a fundamental shift in thinking, strategy, structure, systems, culture, processes, values and orientations within an organisation (Balogun et al. 2004a). Whereas, realignment signifies an organisation's adopted approach for changing the way of doing things without necessarily undergoing fundamental alterations that would typically require a shift in strategy, structure, systems, culture, processes, values and orientations within an organisation (Balogun et al. 2004a). It involves reconstructing or reconfiguring business systems and processes (Balogun et al. 2004a). In other words, the nature of changes indicates the manner and approach through which an organisational change is implemented (Balogun et al. 2004a).

Similarly, Weick and Quinn (1999) delineated two types of organisation-wide changes. The first type, episodic organisation-wide changes, were described to be infrequent, discontinuous and intentional. The authors suggested that episodic changes tend to happen in distinct periods and are usually done in response to changes in external events. On the other hand, continuous organisation-wide changes are changes that tend to be "ongoing, evolving and cumulative" (Weick and Quinn 1999). One thing to note, is that a continuous change is often a combination of small continuous changes, that are implemented simultaneously across the organisation, which have the capacity to create transformational changes (Weick and Quinn 1999).

Grundy (1993) described three organisational change type, based on the frequency or rate of change against the change implementation time. The three change types are: (a) smooth incremental change, (b) bumpy incremental change, and (c) discontinuous change. Smooth incremental changes usually evolve slowly and are usually planned for. As the case maybe, smooth incremental changes normally take a step-by-step approach and so each phase of the change can be reviewed. Bumpy incremental changes are similar to episodic changes described by Weick and Quinn (Weick and Quinn 1999). Bumpy incremental changes proceed gradually, but are intermittently punctuated or jolted by a few sudden transformational changes. The last type of change is discontinuous change; this type of change is typically

characterised by crisis. A diagrammatic representation of these three change types is presented in Figure 5.

Figure 5: Strategic change types (Grundy 1993)



Founded on the extent of work that needs to be done, it was put forward by Nadler and Tushman (1989) Tushman et al. (1986) that organisational changes can be conceptualised either as: (a) incremental or fine-tuning changes (c) frame-breaking (or bending). Incremental changes were described as basic reorientations that organisations undergo and so many of such types of changes were found to be compatible with existing processes or structures in organisations. Fine-tuning changes simply entail finding better ways of exploiting organisations' competencies, and this can be achieved either by (a) refining policies; (b) creating specialised units and linking mechanisms; (c) developing personnel; (d) fostering individual and group commitments; (d) promoting confidence in the accepted norms, beliefs and myths; and (e) clarifying established roles, status and dependencies. On the other hand, frame-breaking (or bending) changes are revolutionary, abrupt types of changes that entail reshaping the entire nature of an organisation making it inevitable for organisational leaders to forge new strategies, systems and processes, which are driven by shifts in fundamental operating core values (Nadler and Tushman 1989; Tushman et al. 1986).

In conclusion, organisational change types are analysed along the following dimensions: amount of time required for the change, degree of pre-planning involved, level of involvement and management style or approach (Kotter et al. 1986). Based on organisational changes' depth of impact, extensiveness and complexity, researchers like Devos et al. (2007), Greiner (1997), Levy and Merry (1986), Dunphy and Stace (1990; 1988), Nadler and Tushman (1989); Bartunek and Moch (1987), Miller and Friesen (1982) have also expressed that organisational changes can be either incremental, transformational, or strategic (which is alternatively referred to as radical). Similar views have been expressed by different researchers; Dunphy and Stace (1988), Greiner (1997), Levy and Merry (1986) and Orkland (1997) have professed that organisational change can also be of first-order or evolutionary and second-order or transformational or revolutionary.

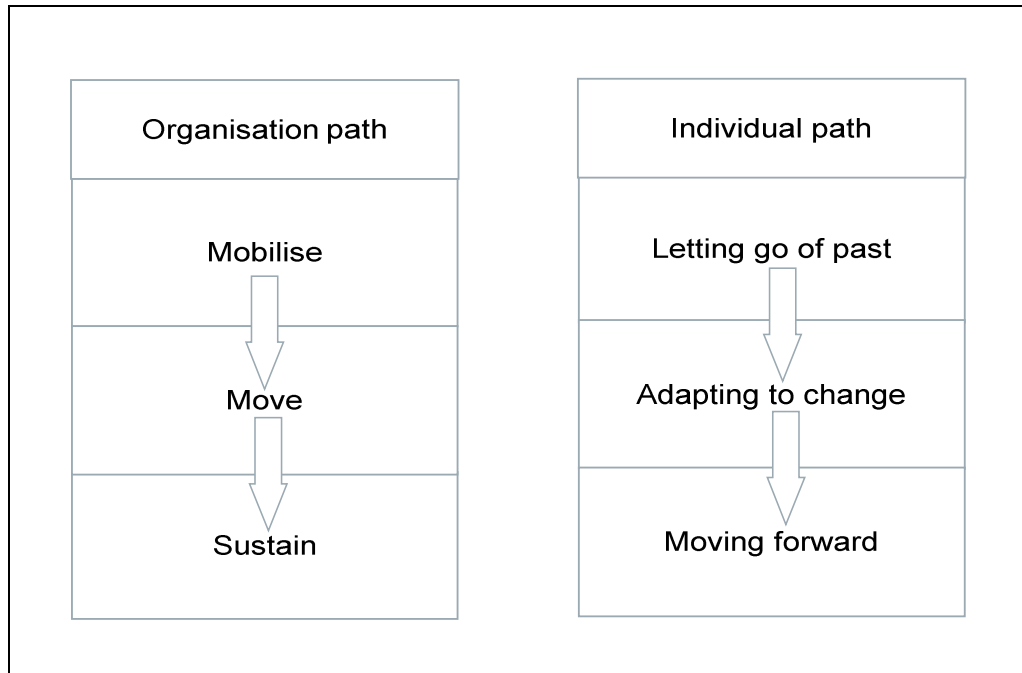
2.2.2 Change paths

Change process paths illustrate the various phases and means through which organisational change can be achieved (Gilgeous 1997). Phases are often used to characteristically highlight the different distinct sequences of the change process. Bullock and Batten (1985) presented a four-phase model, which includes the exploratory phase, planning phase, action phase and integration phase. Concerning this, there exists comprehensible and well-substantiated explanations that have observed the different ways in which individuals react to changes (Rashford and Coghlan 1989). St. Amour (2001) theorised that employees go through three phases during transition processes, namely: new beginning phase, exploration phase and endings phase. The author relates that during the new beginnings (or findings) phase, employees would likely show some elements of denial, anxiety, shock, fear, anger, frustration and confusion. In the exploration phase, employees get stressed and invent avoidance approaches by getting creative or by getting sceptical. This was also observed in Sonnenberg's (1991). However on a more optimistic note than that of Kubler-Ross, once the organisational change is at the endings phase, it was observed that employees began to accept the change, provided the transition is managed appropriately. Despite criticisms that Lewin's (1958) three-step model is

too linear and inappropriate in the broader context of complexity regarding changes (e.g. from Dawson 1994; Kanter 2003), the-step model continues to remain one of the most widely cited business process change paths (Burnes 2004b; Schein 1996b; Weick and Quinn 1999).

Lewin's model of planned change path is illustrated as unfreezing, moving and refreezing. The unfreezing part of the model relies on the assumption that human behaviour exists within defined, but separate equilibrium states (Burnes 2004b; Meyer et al. 2005). So to change human behaviours, the concerned individuals have to let-go of their old behaviours by unfreezing the equilibrium of their present states. Mostly, this step involves making individuals less complacent with their present states while the change is on-going (Burnes 2004b). The second state, moving, is based on the theory that any change no matter what is "a profound psychological dynamic process" (Schein 1996b). It entails the discarding of old behaviours and the adoption of new behaviours. It is worthy to note that during the moving step, the creation of psychological safety to related persons is essential (Schein 1996b). The final step or refreezing entails stabilising individuals' new adapted equilibrium states. According to Schein (1996b), for the final equilibrium state and change, the affected human behaviour must be refrozen. In Figure 6, all through Lewin's three stages, it is shown that organisational leaders have dual responsibilities of managing both the organisational and individual change paths.

Figure 6: Dual leadership responsibilities (Balogun et al. 2004a)



2.2.3 The change process characteristics

Change process characteristics entail diverse sets of delimiting variables or enabling factors that might guarantee the success of organisation-wide changes (van Dam et al. 2008). Rafferty and Griffin (2006) advised that these specific characteristics of change events are important and relative to individuals during organisational changes. For instance, van Dam and Karen (2008) looked at the daily work context in which typical organisational changes take place. Their findings indicate that change process characteristics such as leadership and organisational climate would affect how the change is perceived, implemented, and possibly influence the outcome of the change process. It has also been established that change initiators must consider the scale of the organisational change, the capital cost involved in the whole change project, timescale of the change initiative, nature of pending organisational changes, impetus for change and implementation strategy adopted (Gilgeous 1997; Wilson 1992). Orgland and Krogh (1998) suggested that organisations must pay attention and leverage on the forces of change in order to successfully implement corporate change.

According to Balogun et al. (2004a), the existence of a strong organisational culture and powerful stakeholders are examples of barriers to successful organisation-wide changes. Woodcock and Francis (1990) highlighted the strengths of people as necessary for organisations that desire to reach its fullest potentials. Bell and Burnham (1991) also identified barriers that could act as impediments to an organisation's change efforts. The authors explained that fourteen specific barriers could disrupt and prevent organisations from successfully managing productivity and implementing organisational changes. These are: (1) unclear aims; (2) unclear values; (3) inappropriate management philosophy; (4) lack of management development; (5) confused organisational structure; (6) inadequate control; (7) inadequate recruitment and selection; (8) unfair rewards; (9) poor training; (10) personal stagnation; (11) inadequate communication; (12) poor teamwork; (13) low motivation; and (14) low creativity. Almost all of these barriers have also been identified, repeated and marked in similar studies as barriers to successful implementation of organisation-wide changes.

2.2.4 Understanding organisation-wide change process

There is no dearth of strategic and organisational change management literature as numerous studies, with specific mentioning of classic examples, have explored and explained how organisations can truly achieve this overwhelming feat. Researchers have studied the need and drivers for organisation-wide changes (Beer and Nohria 2000; Brown and Eisenhardt 1998; Gilgeous 1997; Kotter 1996; Lippitt et al. 1985), analysed the management of the change processes (Carnall 2007; Hudson 2007; Senge 1999; Smith 2005; West et al. 2004) and identified eminent barriers to effective change management (Beer et al. 1994; Oakland and Tanner 2007). Others have examined top management's roles and responsibilities during and after the change processes (Beer and Nohria 2000; Kotter 2000), while a substantial number have developed change matrices or models that can predict and anticipate complex interrelationships during business-process changes (Balogun et al. 2004a; Brynjolfsson et al. 1997; Weber and Manning 2001).

Beer and Nohria (2000) and Graetz et al. (2002 pg 11) alleged that there exists no single, integrated and empirically demonstrable model for understanding organisational changes. This is because “generalisations are hard to sustain over time, and they are even tougher to uphold across international, institutional and cultural borders” (Pettigrew et al. 2001). In consideration, the inability to generalise organisational change models should not be of great concern, but rather the anti-intellectual context from which they are developed (Wilson 1992 pg 37). Armenakis and Bedeian (1999) posited that four determining factors, which are the content, context, process and criterion of the organisational changes, would play an influential role in successfully understanding organisational changes.

Explaining further, Armenakis and Bedeian (1999) expressed that “content issues largely focus on the substance of contemporary organisational changes... contextual issues principally focus on forces or conditions existing in an organisation’s external and internal environment... process issues address actions undertaken during the enactment of an intended change... and criterion issues deal with outcomes commonly assessed in organisational change efforts”. This was also corroborated by Walker et al. (2007). In other words, effective organisational change is deep rooted in a healthy, realistic perspective on how the change alters, impacts and/or affects circumstantial factors and conditions (Firth 1999). However, one factor that has been ignored in organisational change research is the individual differences among organisations, change agents and the change targets (Walker et al. 2007). So, the overriding approach adopted by individual organisations in either transforming or re-aligning their core processes and/or culture, to be able to consolidate their marked strengths, buffer appraised areas of weaknesses, exploit emerging opportunities and contain prominent threats, would differ based on the content of the change project, context in which the change project is implemented or managed and desired resultant processes (Devos et al. 2007; Graetz et al. 2002).

According to Devos et al. (2007) and Walker et al. (2007), though researchers have widely acknowledged the importance of three of these factors (content, context and process) and focused on each factor individually, rarely does any of the research integrate and assess these three factors simultaneously as each factor relates to

organisational change. The truth is that the analysis of the multiple contexts, contents and linkage of organisational change processes remains underdeveloped (Pettigrew et al. 2001). Therefore, the theories of successful implementation of organisational change require re-examination in management thinking, (as was also once suggested Tranfield and Smith 1991). Thus, considering Damonpour's (1991) suggestions, organisations may eventually be guaranteed success in their change efforts as long as they find a suitable fit between their adopted change's content, context and process factors. The results of the re-examination of the relationships of an organisation's change content, process and contextual factors could result in useful resources that could aid in the development of successful change strategies and procedures (Walker et al. 2007). In recognition of this gap, it is suggested that change models or classifications should provide for real-time situational considerations and must be of practical relevance (Armenakis and Bedeian 1999; Buchanan 1994; Callan et al. 1994; Firth 1999; Pettigrew and Whipp 1993; Pettigrew et al. 2001). An example of a model that is both generally descriptive and contextually specific is that of Buchanan and Boddy's (1992) Model of Organisational Change (Griffin 1998).

In a broader concept and context, the organisational change process takes place at three levels (Goodstein and Burke 1991). These three levels mainly describe and explain the extent to which employees' involvement can be increased and how the degree of the change's complexity can be reduced (Rashford and Coghlan 1989). The first level involves changing the beliefs, values, skills, behaviours and attitudes of the individuals who work in an organisation (Hofstede 1994; Schein 1996a; St Amour 2001). The second level depicts changes that affect people in teams or groups (Goodstein and Burke 1991), which sometimes entail realignment of leadership styles, work design and allocation, conflict management and so on. The third level requires changing organisational structure and systems that relate to either individuals or groups as members of total organisational climate (Goodstein and Burke 1991). With respect to this, new organisational strategic policies are formulated while existing ones are revamped where possible (Rashford and Coghlan 1989).

The first two levels are particularly vital to consider, because no organisation would really change unless the individuals, or groups of individuals, in the organisation understand the intentions for such organisational changes after which they would tailor their activities and behaviours accordingly (Norton 2002). However, individuals' reactions to changes are essentially change-specific and reliant on individual differences' states (Oreg 2003). An early work by Kubler-Ross (1973), one that summarises advances made in the treatment of patients at their end-stages of life, but sets prominence on how individuals react to grave information that they are terminally ill, puts these states at five, namely: denial and isolation, anger, bargaining, depression and acceptance. Though Kubler-Ross' theory was conceived under a different process, content and context, it is however applicable to how individuals accept to participate in large scale organisational change (Balogun et al. 2004a; Bridges 1991; Bridges and Mitchell 2000; Stuart 1995).

This is because anticipated consequences of the individual beliefs or values alterations hypothetically mark an "end to accepted norms and values" (Armenakis and Harris 2009). For this fear, individuals that are not personally favoured and inclined to the change happening will initially challenge the legality and need for such change, while also continually working out ways to discredit established relevance and urgency of such change. Kubler-Ross' second phase, anger, happens as a result of these individual's inability to frustrate the discontinuance of the adopted change. At this point, Kubler-Ross indicated that individuals see a window through which they can air their views and reservations – that is bargain. Although their terms and concerns might be accommodated or resolved as the case maybe, they are still depressed yet they accept the change. It is expected that as the change events occur, these states will be varied.

In Bovey and Hede's (2001) study, it was rationalised that individuals are most likely to first deny the change, then resist the change before eventually committing themselves to the change. Similarly, Adam et al.'s (1976) transition curve highlighted that individuals exhibit some common behavioural traits (shock, denial, awareness, acceptance, testing, search and integration) during business process changes. Also in analogy with Main's (1977) and Main and Weston's (1982) findings presented in

Lazarus and Folkman (1984 pg 144), which quite matches Balogun et al. (2004a) observation, it was discovered that when individuals under controlled settings are first exposed to changes, they would probably first react by going through three separate stages; which are: protest from adopting the new changes, then show some despair when it gets obvious that they cannot revert the imposed changes, before eventually detaching from their previous work behaviour and accepting the new changes.

Moran and Brightman (2000) stipulated that every change initiative in an organisation sets in motion a cycle of resisting change, recognising the need for change, agreement as to the type of change required and in the end development of implementation strategies. In another study, Rashford and Coghlan (1989) illustrated four stages individuals go through during organisational changes. Similarly as previously explained states, they reckoned that employees will first deny the need to change. In their next described stage they observed that employees in a passive-aggressive approach will not participate in the change. They explained that, at this stage, employees attempt to ignore that the change is happening and thus would not get involved. The third stage put forward by Rasgford and Coghlan (1989) is when the organisational change actually gets done. At this final stage, “the integration of the change into the habitual patterns of behaviour and structure concludes the adjustment and adaptation stage of the change process” (Rashford and Coghlan 1989).

All these pronouncements are considered necessary because employees’ positive attitude and response (emotions, psychological reactions) has been positively related to their emotional engagement, which subsequently has been established to be relevant to achieving successful organisational changes (Avey et al. 2008; Dunphy and Stace 1990). As such, management should consider how likely employees’ response to change will influence their change efforts or initiatives (Rafferty and Griffin 2006). In dealing with organisational changes, employees would generally express their dismay, dissatisfaction and resistance by ignoring it (that is, they exhibit some ‘sportsmanship’ as described by Organ 1988b; 1988; and Podsakoff et al. 1990), and/or tackling it. In tackling it, employees would often

communicate their negative opinions with their colleagues or supervisors (Schalk et al. 1998), change their attitude to work (Kotter 1996; Schalk et al. 1998) and sometimes through incessant absenteeism or withdrawal intentions (Eby et al. 2000; Kotter 1996). Other types of employees' negative behaviours resulting from organisational changes have clearly been explained in a number of studies (e.g. Anuradha and Kelloway 2004; Trader-Leigh 2002).

2.2.4.1 Underlying assumptions and values of change process

Extant theories and models of how individuals confront and accept organisational changes primarily attempt to close two gaps (French and Delahaye 1996). On one hand, research studies urge change initiators to observe employees' reaction and quickly resolve any manifested problems or conflicts between the ends of the phases explained above. This translates that organisational leaders should develop change strategies with the aim of encouraging, coaching and proffering ways through which individuals can overcome limitations. In addition to this, organisational leaders should stress the positive deliverables accruable if the change is successful (French and Delahaye 1996). Employees' readiness to accept the change and desire to move on to the next phase is the by-product of this gap closure approach (French and Delahaye 1996).

On the other hand, the gap connection approach focuses on the individual involved in the change by identifying what will prompt the individual to accept the change. The idea is that individuals will still desire to retain their individuality, while committed to the change (Rashford and Coghlan 1989). Therefore, recommended approaches are aimed at easing the passage of the individuals during and after the change. This approach is based on the assumption that most individuals strive towards self-development or growth once the environment in which they exist is both supportive and challenging (French and Delahaye 1996; French and Bell 1978). In other words, most people desire to make and are competent of making a higher level of contribution to the realisation of organisational goals than most organisational environments will allow.

With respect to assumptions about people in groups and about leadership, French and Bell (1978) highlighted six common hypotheses that subsequent studies on organisation development have built on. The first assumption infers that what goes on in a work team, particularly at the information level, has great consequence on individual members' feelings of satisfaction and competence. A derivative of this conjecture is that most individuals wish to be accepted and/or to interact cooperatively with at least one small reference group (French and Bell 1978). The third assumption lays emphasis on leadership building and transfer across work groups. It simply states that organisational leaders are not always able to perform all leadership and maintenance functions in all circumstances; and at the same, optimise the effectiveness of their groups.

The implication of this is that the task of leading change in organisations is no longer the sole responsibility of the few individuals at the top of organisations (Bennis 2001; Kotter 2000); rather, it is now a shared responsibility of everyone in the organisation (Avolio and Bass 2002; Avolio and Gardner 2005; Moran and Brightman 2000). In agreement with this, past and recent studies have proposed various leaders' interpersonal skills-based models that draw on leader-member exchanges, behaviours and abilities to motivate, communicate and build teams as a valuable criteria towards increasing organisations' success as regards implementing and managing organisational changes (Dale Hendricks 1989; Drucker 2007; Gill 2003; Kotter 1996; LaFasto and Larson 2001; Nadler and Nadler 1997; Northouse 2004; van Dam et al. 2008). The fourth assumption suggests that an organisational culture that supports or indirectly promotes suppression of behaviour, feelings and attitudes (be it negative or positive) would adversely impact on organisation's problem solving, personal growth and job satisfaction.

Although French and Bell (1978) indicated that the expression of feelings might not seem to be helpful per se, they stressed that employees should still be encouraged to express their feelings. This is because the development of group skills in dealing with individuals' feelings tend to create avenues for improved goal setting, leadership, communications, conflict resolution, problem solving, between-group collaboration and improved employee morale (French and Bell 1978). The fifth

assumption is that the level of interpersonal trust, support, and cooperation is much lower in most groups and organisations than is either necessary or desirable, in spite of leaders' efforts toward developing these qualities. The sixth assumption is also about people in groups; it states that the solutions to most attitudinal and motivational problems in organisations are transactional. This has, however, been discredited in later studies. More recent research findings lay emphasis that transformational leadership is more needed than transactional (Bass 1998; Bass 1999; Bass et al. 2003; Masood et al. 2006).

2.2.4.2 Implications of organisation-wide change failures

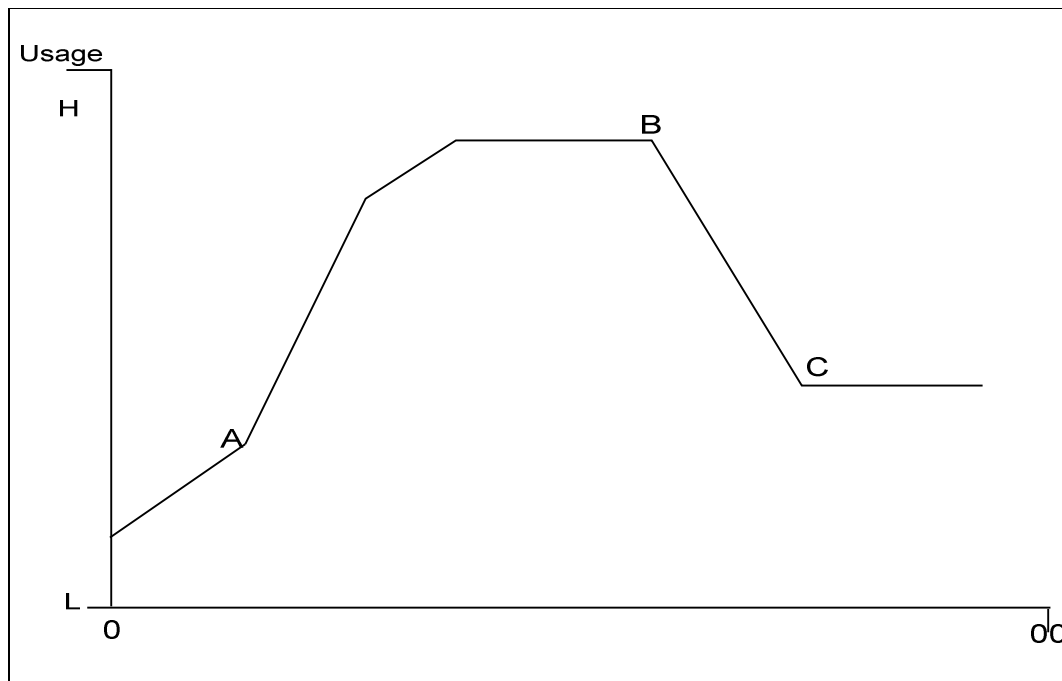
Ming-Chu Yu (2009) described organisational change as the process through which an organisation converts from an existing state to a hoped-for future state in order to increase their effectiveness. In the process of doing this, organisations are usually impelled to change their business operations and models (Jones et al. 2005). The idea of undergoing organisational changes is a risk (Tabrizi 2008) that many executives would rather systematically avoid (Avolio 1999a; Moran and Brightman 2000), because most of those that do try reportedly fail in their endeavours (Collins 2001; Katz 2008; Schaffer and Thomson 1992). More so, the majority of organisations that have implemented transformational organisational changes were found to have failed in their attempts (Beer et al. 1994; Katz 2008; Oakland and Tanner 2007). Worse still, a fraction of those that have either achieved their intended benefits, or declared their change efforts to have been successful, find it difficult to sustain their performance over a long period of time (Kearney 1998; Schonberger 1986). Hence, the inability of organisations to successfully implement organisational change initiatives and at the same expertly manage the resulting business process-changes (and employees) has been largely attributed as reasons to why organisations have failed (Kotter 1996; Oakland and Tanner 2007; Paton and McCalman 2008; Schultz 2007).

Rarely does a change programme fulfil the intended needs (Hind et al. 1996). On average, organisations are said to be capable of only achieving an average of 63 percent of their pre-supposed financial performance (Mankins and Steele 2005). For

example, in a 1995 study, conducted by the Standish group, 84 percent of the 8,380 process-based improvement projects that were implemented across 365 companies were found to have either failed or experienced major problems (Crowe et al. 2002). Holland and Kumar (1995) evaluated that 60 - 80 percent of their observed process change exploits were unsuccessful. Also in accordance with these, the results from a survey by Industry Week on process improvement initiatives in the U.S., presented in Rubrich's (2004) book, reported that "72% of the 884 U.S. companies that responded to their survey were in various stages of implementing an improvement strategy such as Lean manufacturing, Agile manufacturing, Six Sigma, Toyota Production System (TPS), Theory of Constraints or others. Out of these companies, 75% reported that they had made 'no' or just 'some' progress towards their intended goals. Only 2% of the companies reported achieving their desired status".

According to Harrington (1998), typically, an implemented organisational change program would start-off slowly. Thereafter, depending on a lot of factors, organisations might start to record some significant initial success particularly as its level of acceptance amongst employees gradually increases. This is represented as point A in Figure 7. . After some time, the hype reduces, because it becomes no longer interesting or exciting to do and/or because it has not produced the desired results (point B). He added that such a change program ends up with a small group of committed individuals who still keeps faith that it is essential (point C) and remains at this level until, in the near future, someone re-initiates it or a newer initiative is adopted. Otherwise, it gradually fades to the background – never to resurrect again. This illustration above explains a typical case of failed organisational change.

Figure 7: Methodology life cycle cover (Harrington 1998)



Sadly, many companies are still in search of the key to leading changes that succeed and stick (Covington 2002). Top managers in their pursuit, as revealed by Collins (Collins 2001; Collins and Porras 2004), are still “looking for change in the wrong places, asking the wrong questions, making the wrong assumptions and deploying inept business-change approaches and models”. In short, most are merely involved in activity-centered programs instead of results-driven programs (Schaffer and Thomson 1992). Result-driven activities, as explained by Miltenburg (Miltenburg 2008), to all intents and purposes, translates to moving an organisation from “where it is” to “where it wants to be” in terms of expectations, goals and measurable outcomes, and, only a small quota of organisations achieve this; “that is achieve bottom-line results” (Orgland 1997). Hence, several authors have related the effectiveness of organisations’ performance to change management issues (Johnson 1987; Pettigrew and Whipp 1993a). In essence, organisational change initiatives are only considered effective and successful when; (a) it produces the required changes (Beer et al. 1994); (b) it produces the expected results (Schaffer and Thomson 1992), and (c) the end-result of business-change initiatives does not cause

permanent disruption or fatal damage to an organisation's existing structures (Gittel et al. 2006).

2.2.5 Employees' reaction during the change process

Employees' reaction during, and after, an organisation-wide change process is critical to the success of such change (Armenakis et al. 1993; Piderit 2000); which means that the chances that the implementation would be successful can greatly be increased when employees' reactions and psychological well-being are taken into account (van Dam et al. 2008). Similarly, Ming-Chu Yu (2009) pointed out that most real organisational change problems arise due to how employees' adjust and adapt to organisational changes. In view of this, as employees' reactions are managed throughout the change period, employees' become more inclined and open to the change and to alter their routines and behaviours (Wanberg and Banas 2000). Employees' openness to change is thus considered as the inverse to resistance to change (Anuradha and Kelloway 2004; Armenakis et al. 1993). Wanberg and Banas (2000) suggested that openness to change is a factor of employees' willingness to change and positive affect towards the change. See also Kotter's (1996) explanations.

For these reasons, employees' behavioural attitudes and responses to change have been established as relevant mediators for positive organisational changes (Dunphy and Stace 1990; Jing and Avery 2008). Moreover, employees' responses and behaviours to organisational changes typically embody measures of employees' degree of acceptability, perceived usefulness and affective commitment to such change – which are all subsets of employees' resistance to change (Oreg 2003; Piderit 2000). In past research, this has been greatly observed as employees' attitudinal and behavioural responses to changes (Anuradha and Kelloway 2004). These attitudinal and behavioural attributes mainly underpin, constitute and relate to an individual's reactions, belief, perceptions and expectations towards organisational changes (Balogun et al. 2004a).

As such, a substantial amount of theoretical and empirical research has been conducted in view of studying the influence, effect and impact of managers' style, capability, ability and behaviours on organisational performance in relation to employees' behaviours towards organisational changes (Avey et al. 2008; Bass 1999; Bommer et al. 2005; Lowe and Gardner 2000; Richards 2008; Strebel 1996), employees' commitment (Meyer et al. 2004), organisational culture (Giberson et al. 2009; Masood et al. 2006). Each of these studies through its findings have attempted to demonstrate how organisations can build-in both infrastructural and structural frameworks that will underscore and buttress the significance of managing employees, appropriately. A wide range of individual and organisational strategies that may be effective in reducing employee discomfort, negative responses, attitudes and behaviours, and other stress-related problems include effective communication (Callan 1993; Schalk et al. 1998; Terry and Callan 1997), improving and encouraging employees' perception, participation and involvement in organisational changes (Ming-Chu Yu 2009; Moran and Brightman 2000; Weber and Weber 2001), designing job-related tasks that will result in affective commitment (Bass 1985; Commeiras and Fournier 2001; Porter et al. 1974a), building employees' trust in management (Ming-Chu Yu 2009), stress management programmes (George and Jones 1999), and supportive leadership (Hater and Bass 1988; Podsakoff et al. 1990).

Some of these strategies have been confirmed to be among the basic factors that will most likely guarantee successful management of organisational changes and employees (Balogun et al. 2004a; Bennett and Durkin 2000; St. Amour 2001). It has also been found that supportive leadership styles and behaviours increase organisations' capability to implement effective organisational changes and increase employees' in-role and extra-role performances (for example Bass 1985; 1998; Choi 2007; Hater and Bass 1988; Podsakoff et al. 1990). Some of the conclusions, of these types of studies are, that examining manager-employee relationship over time is quite important as it poses an opportunity to understand employees' responses and behaviours to change proposals (Anuradha and Kelloway 2004; Piderit 2000). Hence, it is proven that effective leadership still remains one of the most potent sources of sustained performance and competitive advantage (Zhou et al. 2006).

Although several similar works have further directly or indirectly established positive associations between leadership paradigms, employees' behaviours and organisational performance, leadership-performance relationship research is still inconclusive (Jing and Avery 2008)..

How organisations' leaders help incorporate and sustain business-change initiatives' performance in a way that will effect successful organisational changes and, at the same time, produce superior results over time is needed. To address this, organisational leaders must develop and achieve a viable business model, which is itself a function of positive employee relationships (Gittell et al. 2006) and organisational resilience (McCann 2004; Nathanael and Marmaras 2007). One benefit of this is that managers are now better equipped to predict subordinates' attitude and behaviours towards and after organisational changes (Tepper et al. 2006). The quality of existing relationships between supervisors and employees is one significant factor that can be used to explain almost half of the reasons why employees accept or reject organisational changes (Farr-Wharton and Brunetto 2007). Most aspects of organisational change that are presented have narrowly depicted the implementation and management of organisational changes as isolated, stand-alone events (Meyer and Stensaker 2006).

Therefore, it is important to understand how employees react to organisation-wide changes, because their cooperation is needed to ensure that the change turns out as planned (van Dam et al. 2008). This is because true and successful organisation-wide change starts from the individuals (Balogun and Johnson 2004; Balogun et al. 2004b). Meanwhile, managing employees' attitudinal and behavioural responses to organisational change is a never-ending control process due to the fact that employees' ill-feelings or show of resistance can erupt at any point in time during the changes, and could last for a long-time, even after the implemented change (Anuradha and Kelloway 2004). In short, it can be implied that eventual sustenance of organisational changes is principally a matter of managing employees facing change (Moran and Brightman 2000), the divergence of employees' perceptions (Gilgeous 1997; Ming-Chu Yu 2009) and managing of key employees' whose

prolonged poor performance has the potency of harming the organisation (Charan and Colvin 1998).

Regarding the extent to which employees' are ready to support organisation-wide change, one must repeat that an organisation only succeeds with their change process when the individuals within the organisations change (Balogun et al. 2004a; Kavanagh and Ashkanasy 2006; Likert 1967; Martin et al. 2005). St. Amour (2001) indicated that employees can broadly be grouped into achievers, adopters and abstainers. The achievers are the employees that are readily open to change or support organisation-wide changes with little or no persuasion. The author further marked the achievers to be the top performers during organisational changes and would normally represent 20% percent of an organisation total staff. The adopters constitute a huge 60% of the staff force. Employees that were classed under the category of adopters are easily swayed and would only embrace the organisational change when it goes right. Therefore, it would be of great necessity to persuade the adopters to join the achievers. The last set – the abstainers, are the most visible employees that vehemently oppose and resist organisational changes. To prevent the loss of any employee, especially the adopters who turn out to be the key personnel for the change process, managers were advised to ensure that they create an absolute balance when meeting the needs of each group, or else the achievers might get impatient and leave the company. This would however be detrimental to the change process (Goodstein and Burke 1991).

2.2.5.1 Employees' perception of organisational change process

Employees' perception can either be qualitative or quantitative; qualitative perceptions are founded on intangible, abstract orientations, such as feelings, emotions while quantitative perception are instituted on established facts and tangible constructs (Kable 1983). It is believed that once employees' perception is rightly managed, resistance to change can be reduced down to about half (Vieitez et al. 2001b). Therefore, managing and aligning either type of perception between, and among, top managers and employees during organisational changes is a particularly crucial task for organisations that desire to have productive changes. Similarly,

Gilgeous (1997) stated that “managing perception is very important, since change process is essentially perceiving, assessing and the making of a decision. Going by Gilgeous’ (1997) definition, since perception is the first stage of the process, it is essential that the change is perceived positively; otherwise it would impact negatively on the whole process. Hence, the process of managing perception-based resistance will ultimately influence how employees sense and attribute the change’s usefulness.

The following indicators (which are all agreeable with Bovey and Hede 2001; Schoor 2001; Trader-Leigh 2002; Weber and Weber 2001) signify when employees’ perceived usefulness of change initiatives is high amongst employees.

- i. When employees are conversant with top managers’ intentions and expectations for initiating business-process changes.
- ii. When employees trust management and as such offer little resistance to business-change initiatives.
- iii. When employees believe that the business-process changes will indeed be beneficial to them.
- iv. When employees are not consciously seeking to sabotage the business process changes, but rather support such.
- v. When employees are fully aware and cognisant of how to respond to the business process changes.
- vi. When employees have the required competence and expertise to operate in their newer roles and environments; and
- vii. When employees are at ease with the business-changes or business-process changes.

2.2.5.2 Employees’ resistance to organisation-wide changes

Normally, in most cases, organisational changes will directly affect individual employee’s working conditions, relationships, functions and environment (Ming-Chu Yu 2009; Schalk et al. 1998; Zhou et al. 2006). As such, in instances whereby these alterations result in high levels of discomfort and stress (Callan 1993), employees

will oppose and resist such changes (Anonymous 2009; Jermier et al. 1994; Piderit 2000). This suggests that, more often than not, why employees will likely not support any organisational change unless they have compelling reasons to do so (Schalk et al. 1998). Therefore, resistance-to-change as described by Goldstein (1979) is the “wilful opposition of employees to change”. In other words, resistance to change is “an adherence to any attitudes and behaviours that thwart organisational change goals” (Anuradha and Kelloway 2004; Collinson 1994)’. Hence, employees’ resistance when not rightly managed will hamper organisational change process (Piderit 2000; van Dam et al. 2008) and thus are critical to achieving success (Armenakis et al. 1993).

Generally, employees resistance to change usually stems from employees’ lack of understanding of change events, particularly: (a) when set goals are unattainable (Marks 2007), (b) when there is a mismatch between organisational goals and individual goals (Moran and Brightman 2000; Schalk et al. 1998), (c) ambiguity (Ashford 1988) and (d) sometimes due to employees’ impatience as they would often seek visible short-term results rather than long-term results (Kotter et al. 1986). In view of this, employees’ resistance is seen as a result of perceived injustice, negative emotional reactions, counterproductive work behaviour and disaffective traits among disappointed employees (Fox et al. 2001; Robert Folger and Skarlicki 1999). Thus, the main enabler of employees’ resistance often comes from employees’ distrust in management. This could be caused by employees’ disposition of change initiators’ public displays of favouritism, insensitivity and personality. As a result, employees’ that sense that change initiators actions and behaviours are unfair would resist sustaining the change (Folger and Freeman 1999).

Although, some researchers have positively associated employees’ resistance to change as a negative factor that impedes change efforts (for instance, Anuradha and Kelloway 2004; Trader-Leigh 2002), a sizeable number (Anonymous 2009; Ford et al. 2008a) argued that resistance should rather be seen as a resource to change. This is because employees’ resistance is a response to managerial control and change (Jermier et al. 1994; Piderit 2000), and so it should be viewed that such

opposition is an indicator that the change might be incorrect (Kirkpartick 1985). To further support this view, Ford et al. (2008a) too stated that employees' resistance could in the long run serve as an advantage as it forces an organisation to keep necessary and required perspectives in-play, gives top managements or change initiators the opportunity to clarify and further legitimise change and lastly, creates an avenue for change recipients (employees) to express their untold reservations towards the change. In other words, employees' resistance could turn out to be an opportunity to engage employees (Piderit 2000; Strebel 1996; Tormala and Petty 2004; Wegener et al. 2004). Thereby, employees' resistance could turn out to be beneficial (Ford et al. 2008a; Tormala and Petty 2004; Wegener et al. 2004).

For organisations that desire to resolve employees' resistance, they should adopt a systematic approach that would invariably involve employees in creating a change-facilitative environment (Schoor 2001). Management should consider how likely employees' response to change will influence their change efforts or initiatives (Rafferty and Griffin 2006). In the same manner, Moran and Brightman (2000) advised top management who are considering changes in their organisation to ask themselves why their employees come to work each day and decide whether their planned organisational changes will violate or conform to their employees' response and purpose. It is hoped that from likely answers to these questions, top management would find some justifications, in the longer effect of time (Kirkpartick 1985). However, it is of key essence to note that managing employees' resistance is endless, because employees' resistance to change can survive for a long-time even after the implemented change (Anuradha and Kelloway 2004).

2.2.5.3 The use of stress-coping strategies during traumatic changes

The provision and effective use of social support and resources helps to enhance positive emotional expressions (Meyer 1982). Hence, stress coping strategies are defined styles and mechanisms that help to define an individual's behaviour, typically aimed at dealing with threats and negative emotions associated with exposure to stressful situations (Lazarus and Folkman 1984). Examples of stress coping strategies include, but are not limited to, favourable beliefs, optimism, positive

emotions, dismissive attachment and so on (Bonanno and Mancini 2008; Smith 2006). These mechanisms are employed by individuals either to create some form of avoidance or coping style (Chan et al. 2006); and so are sometimes denoted as repressive mechanisms, when defining avoidance strategies (Weinberger et al. 1979), while they are referred to as a coping or defensive style when intended to alleviate individuals' hollow experiences or exposures (Jamner et al. 1988). Generally, the use of stress-coping strategies by individuals is primarily directed towards repressing psychological stress or posttraumatic adverse experiences (Solomon et al. 2007). Thus, observed variance of psychological outcomes in individuals that adopt stress coping or repressive strategies is an indication of the difference in the rate at which individuals respond, take on board and adjust to tailored programmes capable of alleviating their pains and traumas after stressor events (Bonanno 2004; Bonanno and Mancini 2008; Jamner et al. 1988).

According to Coifman et al. (2007), "traditional theories of coping emphasize the value of attending to and expressing negative emotion while recovering from traumatic life events". In line with this, the results of a number of studies have shown that individuals that deal with traumas and painful ordeals by adopting either repressive or defensive coping style show low levels of anxiety in the face of perceived threats (Prasertsri et al. 2011; Solomon et al. 2007; Weinberger et al. 1979). As such, medically, the use of repressive coping styles have been found to help patients diagnosed with terminal illnesses to survive a little longer than usual (Jamner et al. 1988), become less depressed (Prasertsri et al. 2011), and thrive, after such aversive events (Linley and Joseph 2005). Based on this, stress repressive or defensive coping styles have been successfully associated with personal resilience (Bonanno 2004; Bonanno and Mancini 2008; Coifman et al. 2007; Rutter 2007).

In one study that assessed a set of individuals' recovery from posttraumatic disorder or experience, it was also confirmed that the adoption of repressive coping style during and after upsetting periods resulted in a significant reduction in wide-ranging psychiatric-related disorders and increased personal resilience (Solomon et al. 2007). This was further confirmed in Mancini and Bonanno (2009) whose study

examined what gives rise to resilient capacities in individuals experiencing interpersonal loss, such as the death of a spouse at midlife. A distinction between chronic grief, recovery and resilience was made. Their analysis showed that individuals that experienced chronic grief never really recovered from high distress or depression. The trajectories of individuals that simply recovered and those considered resilient are relatively similar. The only difference is that the authors found that ascribed resilient individuals expressed lower distress or depression, two years after the incident (Bonanno and Mancini 2008). The trajectories are reproduced in Figure 8. Discussions of their results presented supplementary explanations that have also been stated in various studies (for example, Amiot et al. 2006; Rafferty and Griffin 2006; Terry and Callan 2000).

Figure 8: The effect of use of stress repressive styles after interpersonal loss



2.3 Organisational performance and organisation change

Employees' beliefs and attributions of success towards their jobs lead to job attitudes and behavioural intentions, and are then translated into actual behaviours (Schalk et al. 1998). In view of this, it is generally advisable for top managements in

organisations to continually re-evaluate their success milestones and landmarks, and also actively ensure that increased demands placed on employees, as a consequence of business change processes, are counteracted with sufficient support (Vakola and Nikolaou 2005). That is to say, that superiors placed in charge of change efforts must acknowledge the need to first evaluate and buffer the organisation's capacity for change (Meyer and Stensaker 2006) and the significant effect of employees' attitudes and behaviours in sustaining organisational changes (Vakola and Nikolaou 2005). These are acclaimed to be among the integral factors that will most likely guarantee successful management of organisational changes (Bennett and Durkin 2000; St. Amour 2001).

Markus and Tanis (2000) shared that organisational performance and success could also be relayed in terms of technical, financial, market or economic performance and success. These various attributions of organisational performance and/or success widely vary considerably depending on the time the evaluation is done and from what viewpoints it is done (Larsen and Myers 1999; Standing et al. 2006). In explicit terms, the attributions that usually described organisational performance and success are quite relative to individuals and largely based on the fact that "success is a moving target" (Larsen and Myers 1999). For instance, an increase in goods or stocks might come across to the sales and marketing teams as an improved readiness and pro-activeness in fulfilling customers orders, while it might be seen as waste on the part of lean champions (Goldratt et al. 1993; Womack et al. 1990). To thrive in turbulent evolving environments and at the same time maintain long-term performance, organisations must translate their capacity for resilience into appropriate actions and cognitive factors necessary for survival (Lengnick-Hall et al. 2010).

According to Norton (2002), for organisations to succeed and be able to sustain derived performance and benefits over time, all individuals (both managers and subordinates) must understand the intentions for implementing their organisation-wide changes (or strategy) after which they must tailor their activities and behaviours accordingly. The desired expectations of the change success and organisational performance must be related in terms of personal gains (Lengnick-Hall et al. 2010).

This implies that organisational leaders' and employees' success must be duly acknowledged and rewarded accordingly; mainly because organisational leaders' motivation to explore new opportunities is significantly influenced by their own or organisation's past success or current performance (Brown and Eisenhardt 1997). However, except for a few studies (e.g. Jing and Avery 2008; Krishnan 2001) that explain how and why organisational leadership affects employees' and organisational performance, a number of studies according to Wang et al. (2011), Dvir et al. (2002), Menges et al. (2011), Bass (1985) just seem to focus on confirming that organisational leadership has a positive relationship with employees' and organisational performance.

Nonetheless, in both type of studies, it is affirmed that transformational organisational leadership moves followers to exceed expected performance, which also leads to high levels of follower satisfaction and commitment to the organisation (Bass and Riggio 2006). Employees' readiness to support organisational changes is found to result in positive attributable behaviours and outcomes (Balogun et al. 2004a). More recently, organisational leadership-based studies surmise that poor leadership traits could be the antecedent for organisations' performance decline (Carmeli and Sheaffer 2009; Collins and Porras 2004). In addition, organisational leaders' past success or current performance is seen as a indicator and stimulant for future performance by employees (Zhou et al. 2006). The long-term motivation of most organisations carrying out organisation-wide changes or implementing various strategies is based on their expectations to "shift status from perceived corporate liability to that of true competitive advantage" (King 1989).

In this case, competitive advantage was regarded as a snippet of envisaged expectations, as each priority, by and large, seek to pull off the same benefits in the long run. Alternatively, it was considered to be subsets of an organisation that has set priorities and overall organisational goals. These set priorities and organisational goals are usually formed starting with clearly defined pre-set expectations and linked with expected benefits in terms of increased performance in segmented areas (Ferdows and De Meyer 1990; Hanson et al. 1995; Karim et al. 2008). This also symbolises appropriate developments of certain functionalities in the organisation

(Boyer and Lewis 2002; Hooley et al. 2004). Boyer and Lewis (2002) acknowledged that commonly cited competitive advantage and priorities are complementary of one another and can equally aid in developing other desired organisational potentials. These, potentials, altogether serve as spring-boards in attaining proficiency, effectiveness and efficacy with which an organisation assumes preferential status (Chang et al. 2002). Rosenzweig and Roth (2004) further state that all competitive priorities are related to one another.

It was confirmed by Weick and Sutcliffe (2001) that unsuccessful transformational organisation-wide changes are capable of causing fatal disruptions to organisations' systems, processes and operations. This implies that large organisation-wide changes would typically be painful to participants, which is why employees would resist it (Kippenberger 2000; Tushman et al. 1986). What makes it worse is the fact that excessive organisation-wide changes will, in most cases, cause employees to experience high levels of discomfort and stress as their jobs, areas of responsibility and roles changes (Callan 1993; Hellriegel et al. 2008; Ming-Chu Yu 2009). Firth (1999) explained that organisational changes that entail values shifting of core and deep-rooted needs embody those that are transformational, in that such changes would most times completely alter organisations' strategies, corporate purposes, and management style. Those that are shallow, which he denoted as transactional organisational changes, merely bring about changes to management practices, systems and processes. After the author's descriptions, it was summarised that transformational changes are easier and quicker to implement when grouped into series of transactional changes (Firth 1999). In spite of this, Firth (1999) acknowledges that transactional changes would eventually fail or falter in the longer period of time if such (transactional) changes are not underpinned by transformational changes. Hence, the process of developing expertise in managing either small or large scale changes should not be approached separately.

According to Tushman et al. (1986), the major difference between performing and non-performing organisations is that successful organisations have developed a proficiency in managing both the transactional and transformational types of changes. The authors explained that this is because an organisation that can

effectively manage incremental changes (i.e. transactional changes) is able to develop more interlinked systems and structures, which in return create stability that such organisations would need to successfully, manage compatible frame-breaking or transformational changes. Furthermore, organisations can use incremental changes to build on and take advantage of organisational inertia; and when the need arises, frame-breaking changes can be implemented, as they present more opportunities for substantially re-orienting and re-aligning organisations in competitive and rapidly changing business environments (Tushman et al. 1986). Because of this, “high-performing firms initiate reorientations when environmental conditions shift and implement these changes rapidly” (Tushman et al. 1986).

In a study (Gittell et al. 2006) that explored organisations’ competence to recover from disruptive events, it was stated that organisations that succeed in implementing organisational changes exhibit a higher competency to bounce or return back to a state of competitiveness and effectiveness faster than those that do not have such a tendency. The reason these organisations displayed a significant level of ability to maintain organisational performance is dependent on organisational resilience. Thus, restating Gittell et al.’s (2006) findings, organisational resilience is often referred studies as (a) the maintenance of positive adjustment under challenging conditions, (b) the ability to bounce back from untoward events, and (c) the capacity to maintain desirable functions and outcomes in the midst of strain. Likewise, it was reported by Avolio and Gardner (2005) and Roberts and Dowling (2002), that organisations’ ability to persistently achieve desired results amidst disruptions is a function of their organisational resilience. Meanwhile, organisational resilience is both a dynamic capability and an active catalyst of organisational adaptability that is developed over time and would in effect improve organisations’ capacity and capability to allocate and develop adaptation and change capabilities (Gittell et al. 2006; Wildavsky 1988).

It thus makes sense to say that since organisational resilience is an embedded set of individual level knowledge, skills and abilities (Lengnick-Hall et al. 2010), organisational leaders must, therefore, instil some degree of resilience into their subordinates in order for them lead changes successfully. In other words, an

organisation's capacity for resilience, which would in return help organisations to successfully implement organisational changes and at the same time maintain long-term performance, is a "multilevel collective attribute emerging from the capabilities, actions and interactions of individuals and units within a firm" (Lengnick-Hall et al. 2010). Hence, the development of resilience is essential for organisations wishing to maintain long-term performance (Hamel and Valikangas 2003; Lengnick-Hall and Beck 2009; Luthans et al. 2007). In the next section, the concept of resilience and its associations to response to stress and changes are explained.

2.4 Resilience

Resilience is a key construct that can practically help organisations become more aware of their environs, build adaptive capabilities as well as manage keystone capabilities in a complex, dynamic and interconnected environment (McManus et al. 2007). In Polk (1997), resilience was hypothesised as a four-dimensional construct, namely: dispositional, relational, situational and philosophical. In view of this, resilience accounts for a system's capacity to continuously reconstruct itself (Hollnagel et al. 2006) and develop capacities required to adapt and absorb variations (Hollnagel et al. 2006), and also to overcome or recover from major disruptions (Horne and Orr 1998). In other words, the concept of resilience incorporates the components of stability, i.e. the capacity of systems to return to an equilibrium state after a temporary disturbance (Ponomarov and Holcomb 2009). In essence, resilience is often related as a catalyst that helps individuals, systems, communities or organisations to capitalise on unexpected challenges and changes (Lengnick-Hall et al. 2010). It connotes a state of being healthy despite adversity (Masten and Reed 2002).

However, the notion that resilience is a multidimensional, broad and heterogeneous construct makes it difficult to argue beyond a marked causal relationship (Ponomarov and Holcomb 2009; Ungar 2003; Ungar 2004). This is because the process of establishing how resilient organisations, individuals or communities are is subject to several factors, which when not considered can effectively alter already

established conceptions of resilience (Ungar 2003). As such, available literature on resilience is believed to be relatively-defined and context-specific (Ungar 2004), rudimentary (Masten and Reed 2002) and sometimes inconsistent when considered across different themes (Polk 1997). Hence, there is a conflicting report as to resilience having a unified theory and similarities across differing research disciplines. While Ponomarov and Holcomb (2009) stated there are none, Bhamra and Burnard (2010) suggested there are actually similarities among existing literature across the various fields. This review supports the latter view; thus further providing an underlining basis of comparisons.

Available definitions of resilience, more likely than not, comprise of elements that relate to how systems under consideration change and cope when exposed to disruptions while at the same time endeavour to retain the same controls or functions (Carpenter et al. 2001). This also covers how such systems attempt to recover from these untoward events without destroying their adaptive and relational capabilities or performance (Dalziell and McManus 2004; Gittell et al. 2006). Horne and Orr (1998) explained in their study that, in most cases, resilience is expressed as a fundamental quality of individuals, groups, organisations and systems used as a whole to respond productively to significant change that disrupts the expected pattern of events, without engaging in an extended period of regressive behaviour. In another study, it was defined as the ability of an organisation (system) to keep, or recover quickly to, a stable state, allowing it to continue operations during and after a major mishap or in the presence of continuous significant stress (Wreathall 2006). Thereby, resilience is viewed as a systems' ability to successfully regulate itself so as to adjust to the compounded impact of internal and external upsetting events over a significant time period (Carpenter et al. 2001; Sundström and Hollnagel 2006). In Table 3, common definitions of resilience though considered from different perspectives are presented. These varied contexts will be discussed next.

Table 3: General descriptions of resilience

Author(s)	Definition
Atkinson et al. (2009)	Resilience is the capacity to recover from extremes of trauma, deprivation, threat or stress.
Mancini and Bonanno (2009)	Resilience as a specific trajectory of psychological outcome and describe how the resilient trajectory differs from other trajectories of response to loss.
Tusaie (2007)	Resilience is the capability to adapt better than expected in the face of significant adversity or risk.
Luthans et al. (2006)	Resilience is the developed psychological capacity that systems deploy when rebounding from adversity.
Folke et al. (2006)	Resilience is an approach through which systems can persist through continuous development in the face of change and at the same time innovate and transform into new more desirable configurations.
Ungar (2004)	Resilience explains the outcome from negotiations between individuals and their environments for the resources to define themselves as healthy amidst conditions collectively viewed as adverse.
Luthar and Cicchetti (2000a)	Resilience is a dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma.
Polk (1997)	It is the ability to transform disaster into growth and move forward.
Dalziel and McManus (2004); Hollnagel et al. (2006)	Resilience is the essential characteristic that enable systems to identify, adapt and recover from significant disruptions.
Walker et al. (2004)	Resilience is the capacity of a system to absorb disturbance and reorganise while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks.

2.4.1 Typical context from which resilience is reviewed

General ideas of resilience remain binding and logical within or in relation to the particular perspectives, contexts and disciplines from which it is viewed (Ungar 2004). However, integral to the different perspectives from which resilience is considered are two main relational capabilities. These are, that: (a) resilience is a series of dynamic adaptive capacities that enable individuals, organisations and communities to sufficiently recover from unpleasant situations or significant disruptions (Coutu 2002; Gittel et al. 2006); and (b) the development of positive transactional self adjusting and adapting behaviours, techniques, processes and systems can sufficiently predict casual impacts of future risks, adversities, threats and protective attributes in individuals, organisations and communities (Masten and Powell 2003; McManus et al. 2007; Ungar 2004). Based on this, there is no one generally accepted approach for building resilience (Atkinson et al. 2009; Ponomarov and Holcomb 2009). An outline of examples of resilience concepts as presented by Folke (2006) across different perspectives is presented in Table 4. A summary of these three perspectives are presented in the next subsections.

Table 4: A sequence of resilience concepts (Folke 2006)

Resilience concepts	Characteristics	Focus on	Context
Engineering resilience	Return time, efficiency	Recovery, constancy	Vicinity of stable equilibrium
Ecological resilience/ social resilience	Buffer time, Withstand shock, Maintain function	Persistence, robustness	Multiple equilibria, stability landscapes
Socio-ecological resilience	Interplay disturbance and reorganisation, sustaining and developing	Adaptive capacity, transformability, learning, innovation	Integrated system feedback, cross-scale dynamic functions.

2.4.1.1 Ecological perspective

The bulk of resilience-based studies were originally conducted along ecological and socio-ecological dimensions (Folke et al. 2002; Folke 2006; Gunderson 2000; Holling 1973; Sheffi and Rice 2005). It is envisaged that a change in environmental conditions or factors will likewise necessitate a change in behaviours, systems and/or process needed to accelerate adaptation to the evolving environment (Folke et al. 2003; Folke 2006). As such, resilience is primarily seen as a “measure of the persistence of systems and the ability to absorb change and disturbance and still maintain the same relationships between the state variables” (Holling 1973). Hence, from an ecological perspective, two commonly emphasised resulting outcome of resilient systems are: (a) their ability to maintain equilibrium in the face of adverse disruptions (Folke 2006; Walker et al. 2004), and (b) their capacity to adequately recover, re-organise and perform at the pre-disruption or a higher pre-disruption existing level post-the-disruptions (Carpenter et al. 2001; Folke 2006).

Along ecological views, discussions concerning resilience are often about balancing the dynamics of socio-ecological systems (Walker et al. 2004); a potential explanation of why a substantial number of studies have focussed on helping socio-ecological systems develop adaptive capacities that will enable them absorb shocks and still maintain function (Folke et al. 2002; Folke et al. 2003; Folke 2006; Smit and Wandel 2006). The common justifications for these types of studies are hinged on the predisposition that socio-logical systems that are able to cope with, adapt to and adjust to disruptive changes are better positioned to attain ecological stability and persist (Holling 1973) in order for these systems to create sustainable pathways for development (Folke 2006; Smit and Wandel 2006; Walker et al. 2004), in addition to maintaining vital functions (Smit and Wandel 2006). In conclusion, socio-ecological resilience is inferred as: (a) the amount of disturbance a system can absorb and still remain within the same state or domain of attraction, (b) the degree to which the system is capable of self-organisation (versus lack of organisation, or organisation forced by external factors), and (c) the degree to which the system can build and increase the capacity for learning and adaptation (Armitage 2006; Folke 2006).

2.4.1.2 Psychological science perspective

A large proportion of resilience studies along psychological science perspective stemmed from the socio-ecological concepts of resilience (Folke 2006; Hind et al. 1996). Although resilience was primarily explained from an ecological perspective, it was found to be inadequate to account for the diversity of systems' resilience examples and individual's experiences of resilience (Luthar et al. 2000a; Ungar 2004). Essentially, the reason for this is because studying resilience from an ecological standpoint only presented a retroactive reflection and understanding of resilience (Ungar 2004). Thus, Ungar (2004) stated that an understanding of alternate approaches (such as psychological approach) would reflect a better and fuller representation of resilience and its associating intervention constructs. Within the psychological viewpoint, researchers of resilience have continued to conduct studies that have the potency of helping build-up individuals' buffers and stress depressants against severe mental, medical, emotional and environmental stressors (Adger 2000; Coutu 2002; Luthar et al. 2000b; Ungar 2004). Thus, the concept of resilience from a psychological science perspective transcends beyond showing empathy (Dutton et al. 2002), but one which is considered to be a reflex way of facing and understanding the world (Coutu 2002), so as to develop adaptive behaviours and coping mechanisms that can promote individuals' capability to pull through better in the face of adversity

Chan et al. (2006) provided some insights into how personal resilience helped individuals suffering from coronary heart disease recover faster after been diagnosed. Chan et. al.'s findings is used in this study as a reference case because it highlights the significance of personal resilience in helping individuals overcome unpleasant and deteriorating life-changing experiences. In the study, 67 patients were put through an 8-week cardiac rehabilitation programme and two components score, namely the physical health component score (PCS) and mental health component score (MCS), were related to personal resilience. The authors' results indicated that observed patients' PCS considerably improved after the programmes they were put through. Hence, individuals having a higher physical health component score were said to have higher resilience and quicker growth post-trauma. Similarly, the patients' were found to have higher levels of mental functioning, although it was

not confirmed whether the 8-week rehabilitation programme had any impact on this outcome. How Israeli rescue workers whose work involves body handling following terrorist attack cope with resulting associating psychological disturbance was also related to personal resilience (Solomon et al. 2007). In the study, it was related that a large number of the Israeli rescuers or body handlers suffer from posttraumatic disorder and are usually left horrified. 87 rescuers were chosen at convenience; and their levels of exposure, their adopted repressive coping style and threat perception were assessed. The authors' (i.e. Solomon et al. 2007) results proved that individuals that were able to adopt one form of repressive coping style to positively interpret their levels of exposures and threat perceptions exhibited higher resilience-bolstering factors.

In another similar study, that looked at how people endure from life's hardship (Coutu 2002), it was highlighted that three basic characteristics account for the attributes of individuals that are resilient from those that are not. The first characteristic describes an individuals' propensity to accept and face the reality of the consequences of an adverse or upsetting event. This outlines an individual's deep belief and optimistic nature that matter for survival. This is, however, in contrary to earlier assertions that individuals would first go into a state of denial as a coping mechanism. The second attribute of a resilient individual emphasises the individual's ability to find social constructions of reality (Weick 1993) towards developing rehabilitative meaning of adverse aspects of the situation and conditions (Coutu 2002). According to Coutu (2002), this highlights individuals' strong values, strengths and capacity to be robust under conditions of enormous stress and change. The last characteristic embodies individuals' bricolage to improvise or innovate in an attempt to steer themselves away from adverse situations (Coutu 2002; Weick 1993; Weick et al. 2005). Based on these examples of resilience studies along psychological science perspective, resilience is commonly viewed as the "capacity of an individual to respond and even prosper from negative or positive stressful circumstances" (Luthans et al. 2006). Along this line of reasoning, resilient individuals are described as those that are still able to show significant levels of confidence, optimism and hope in the midst of adverse circumstances (Luthans et al. 2006) towards relieving resulting post trauma-related distress (Connor et al. 2003).

2.4.1.3 Organisational resilience perspective

The concept of resilience, from an organisational perspective, still remains undeveloped (Youssef and Luthans 2005). In existing literature, it is qualified as a category of adaptive processes, that is developed over time (Wildavsky 1988) and, broadly characterised by patterns of positive adaptation in the context of significant risk or adversity (Masten and Reed 2002; Masten and Powell 2003). In line with this explanation, organisational resilience is associated with an organisation's adjustment capacities or abilities (Ponomarov and Holcomb 2009) employed in predicting viable strategic positions (Brown and Eisenhardt 1998; Hamel and Valikangas 2003), that will enable it to positively adapt and respond to both present and potential changes (Dalziell and McManus 2004; Mallak 1998) amidst disruptions, without destroying its relational obligations (Gittell et al. 2006). So therefore, organisations' ability to effectively and properly anticipate and readily adjust to the pace of disruptive changes is considered to be a general attribute of organisations that are able to survive amidst disruptive events (Brown and Eisenhardt 1998).

Organisational resilience was defined by Lengnick et al. (2010) as a "firm's ability to effectively absorb, develop situation specific responses to, and ultimately engage in transformative activities to capitalise on disruptive surprises that potentially threaten organisational survival". Grounded on extensive reviews of literature on organisational resilience, two underlying themes used to explaining resilience are presented (Lengnick-Hall et al. 2010; Luthar et al. 2000a; Luthar and Zelazo 2003; Ungar 2004). These two dichotomies of resilience themes were referred to as the prevention (or anticipation) and the containment approach, by Sutcliffe (2011). The first theme is based on ecologically-instituted models while the second themes is in a constructionist interpretation of resilience (Ungar 2004). Along the dimension of the first theme, resilience connotes exposure to adversity (Luthar et al. 2000a) and the main onus is on how organisations can rebound from unexpected, stressful, adverse situations (Lengnick-Hall et al. 2010). Furthermore, it describes predictable relationships and compensatory factors that help to neutralise or contain risks, challenging situations and negative outcomes (Sutcliffe 2011; Ungar 2004). In conclusion, this theme underlies organisations' attempt to develop capabilities with

which to recover from mishaps that have already occurred, before they worsen and cause serious harm to the organisation (Sutcliffe 2011).

The second theme looks beyond restoration and presents an expanded view of the manifestation of social competence or positive adjustment outcomes (Luthar et al. 2000a). It describes organisations' need to develop ability so as to keep pace with future disruptions as well as create new opportunities (Lengnick-Hall et al. 2010). Firstly, it depicts a picture in which organisations try to anticipate and identify the events and occurrences that pose greater harm to the organisation (Sutcliffe 2011). Secondly, this theme involves having in-place a credible system with which organisations can suitably and periodically assess their immediate environments for sudden upheavals that pose fatal and disastrous impacts (Tushman et al. 1986). Lastly, it emphasises organisations' need to establish formalised systems through which they can identify threats and impending disruptions in their immediate environments (Hamel and Valikangas 2003; Sutcliffe and Vogus 2003). In summary, a typical approach of resilience from this perspective suggests that organisations have properly defined and validated business support systems, which in most case will include contingency and continuity plans, succession plans, emergency response plans and so on (Coutu 2002; Sutcliffe 2011). Primarily, these programs offer organisations' some degree of security and increased ability to bounce back from disruptive occurrences (Sheffi 2005b). Exemplary discourses of resilience are anchored on the assumption that risk factors, threats and opportunities, though indefinite across populations (Ungar 2004), are either totally predictable, partially predictable, forecastable by extrapolation, or unpredictable (Ansoff and McDonnell 1990).

In some studies, this is expansively regarded and discussed as environment scanning and awareness (Okumus 2004). Environmental scanning is primarily founded on the assertion that shifts in business environment will necessitate some form of organisational response that will in return create changes (Tushman et al. 1986). In anticipation, organisations process their immediate environment while adequately planning ahead and embarking on necessary fitting organisation-wide changes well before they might be forced to do so (Ansoff and McDonnell 1990;

Sutcliffe and Vogus 2003; Tushman et al. 1986). Meanwhile, this process is reliant upon organisational leaders recognising external threats and in anticipation changing to accommodate the associating organisational changes (Tushman et al. 1986). This involves developing appropriate and novel solutions to challenges (Martins and Terblanche 2003), in an attempt to be able more accurate in diagnosing environmental conditions (Lengnick-Hall et al. 2010). Lastly, this practice is ascribed as an enhanced systems' capability that enables organisations to develop a set of responses so as to deal with unexpected evolving disturbances or conditions that have adverse impact on organisations (McManus et al. 2008; Sutcliffe 2011).

In regards to these two themes, researchers often advise organisations to develop or adopt adaptive capabilities that would enable them to develop a greater repertoire of actions to utilise should disruptive events occur towards increasing their chances to continue to operate at an acceptance performance level post the disruptions (Dalziell and McManus 2004; Lengnick-Hall et al. 2010; McManus et al. 2008; Riolli and Savicki 2003). Hamel and Valikangas (2003) demonstrated how resilience can be built by using an imaginary ratio. They implored their readers to imagine a ratio in which the numerator measures the magnitude and frequency of strategic transformation while the denominator estimates the time, expense and emotional energy required to come about the strategic shift. They reasoned that an organisation who desires to have continued success are left with no other choice but to increase the numerator and at the same time steadily reduce the denominator. This translates that revolutionary changes should be quickened but in piece-like evolutionary alterations – that has no tragic surprises and colossal damages. This view was also supported by Firth (1999).

In conclusion, the higher the level of resilience capacity an organisation possess, the more likely it is that such an organisation will attain a position towards beneficial and robust transformation (Lengnick-Hall and Beck 2009; Lengnick-Hall et al. 2010). This involves the operational managers regularly endorsing proficiency and encouraging both individual and organisational growth by continuously developing, refining, and understanding all the possible challenging 'situations' they could face, the root cause

of these 'situations' and what sort of response to these 'situations' would ensure safe performance (Vogus and Sutcliffe 2007).

2.4.2 Common constructs used in relation to describing resilience

Given that resilience itself cannot be directly measured (Luthar and Zelazo 2003), a couple of organisational attributes have some elements in common with the construct of organisational resilience used to describe and explain the concepts of systems' resiliency (Lengnick-Hall et al. 2010). These constructs describe distinguishable aspects of a set of individuals, organisations or communities that make them unique (Luthar et al. 2000a). In line with this, what resilience means, how it impacts on entities or systems and its implications on continuously changing existence and future well-being of individuals, communities and organisations have been expansively related to engineering (Hollnagel et al. 2006), adaptability (Folke et al. 2002; Walker et al. 2004), response to adversity (Walker 1997), vulnerability (Dalziell and McManus 2004), human and strategic management (Hamel and Valikangas 2003; Lengnick-Hall and Beck 2009; Lengnick-Hall et al. 2010), agility (McCann 2004; McCann 2004; Timmer 2007), sustainable development in socio-ecological systems (Gunderson 2000; Walker et al. 2004), supply chain management (Christopher and Peck 2004; Christopher 2005; Sheffi and Rice 2005), and dynamic stability or transformability of systems (Walker et al. 2004). Analyses of these studies, across the three different perspectives, reveal that resilience has been measured along six dimensions (Hind et al. 1996); namely: power structure, relationships, reality sense, attitude change, differentiation and communication.

The most common dimensions explored are: relationships, attitude to change and differentiations; which all relate that resilience enhances adaptable functioning posttraumatic events (Hind et al. 1996). Although successful adaptation post traumatic events is widely related to the manifestation of resilience (Luthar et al. 2000a; Luthar and Zelazo 2003; Luthar and Zelazo 2003). The expression of positive adjustment constructs can also be used to explain resilience (Luthar et al. 2000a; Luthar and Zelazo 2003). However, caution should be shown in creating the impression that the possession of positive or negative behavioural adjustment

factors is all an organisation, individual or community needs to develop personal resilience (Luthar et al. 2000a). This is because, a state of wellness in addition to the absence of dysfunctional functions in individuals', organisations or communities after disruptive events is largely subjective (Luthar et al. 2000b). In relation to this, individual organisations or communities that do not exhibit a certain set of qualities might be hastily deemed to be non-resilient (Luthar et al. 2000a). Therefore, in this section of the literature review, some commonly discussed complementary attributes and influence of resilience on linked systems as discussed in different subject areas are identified and highlighted. This is carried out in an attempt to provide an understanding of the defining concepts of resilience and also to reveal the interrelationships of these commonly discussed components of (for example, as done by Ponomarov and Holcomb 2009).

2.4.2.1 Resilience and disruptions

Literarily, disruptions are natural or self induced disturbances or interruptive occurrences that upset the normal operability of humans, nature or systems and as well have the potential of resulting in fatal delays, displacements, discontinuities and instabilities. Disruption can either originate from insurances outside the system or from within the system or both (Gallopín 2006); however disruptions are really never as a result of a single failure (Sheffi 2005b). As such, they are referred to as disturbances which are large enough to disturb the normal operability of systems, and also that are deemed to be capable of threatening the existence, of organisations' systems (Gallopín 2006). In isolation, a disruptive event if not properly managed will affect organisation's performance (Adger 2006; Sheffi and Rice 2005; Weick and Sutcliffe 2001). The assessment of the impact of disruptions on value chains of interwoven networks and systems is important, but complex, considering that the independencies that exist among these systems aggravate the difficulty of determining where vulnerabilities exist in the systems or networks (Sheffi 2005b).

Considering Gallopín's (2006) analysis, not all disruptions are severe, as some might eventually turn out to be "windows of opportunity for improvement". Based on the above stated lines of reasoning, resilience relates to inherent positive adaptive

schemes and behaviours that enable organisations respond successfully to severe systemic disruptions without destroying its existing structure (Mallak 1998). However, disruptive events are, however, not always as a result of unplanned, unanticipated and unconscious series of activities, but can also come about even when it is a well planned internally-driven adjustment (Stewart and O'Donnell 2007). For example, any organisation-wide change targeted at creating a more efficient and cost-saving system that eventually goes wrong is also capable of creating the same disastrous effect as unplanned organisational or environmental disruptions (Ponomarov and Holcomb 2009; Stewart and O'Donnell 2007). Hence, the following points listed below are crucial in relating resilience to disruptions:

- i. The fact that resiliency of systems varies within and across disciplines or subject matters because the maximum amount of stress or disruptions that a system can absorb before losing its ability to recover also varies (Hollnagel et al. 2006; Walker et al. 2004). Once this established threshold is exceeded, targeted recovery attempts become increasingly difficult and almost impossible (Hollnagel et al. 2006; Walker et al. 2004). According to Lengnick et al.(2010), this is based on a physical sciences viewpoint that a resilient material, or system, is one which is able to regain its original shape and characteristics after being stretched provided it does not exceed its breaking point.
- ii. Resilience building is dependent on the level of preparedness and adaptive strength of individuals, systems and systems under consideration (Dalziell and McManus 2004; Gallopín 2006). In other words, resilience highlights not only areas of deficit or shortcomings of investigated individuals, communities or organisations; it also places emphasis on their strengths and buffering capacities (Luthar et al. 2000a). This suggests that a resilient system is able to store adequate adaptive capacity needed for renewal, reorganisation and absorption of larger shocks without changing in fundamental ways (Folke et al. 2003).

There exists eight characteristic stages in between the time a disruption is considered to have severe long term impact and the point the disruption occurs

(Sheffi 2005b). These hypothetical stages of disruption profile are: preparation, the disruptive event, first response, delayed impact, full impact, recovery preparations, recovery and long-term impact. At the preparatory stage, allowance is given for organisations that are well able to foresee and prepare for disruptions so as to minimise the disruption's effects. However, this is not the case in most cases, as disruptive events usually happen unannounced. (Sheffi 2005b). The disruptive event is the actual time when the disruption happens. First response stage is the domain of first respondents. It emphasises when an organisation first notices the disruption and performs an initial assessment of the disruption. The delay impact stage illustrates the types of disruption whose impact is not felt immediately. The full impact stage is when the impact is expressly noticed, which often results in a decline in performance and core functions. The recovery preparation stage involves planning and developing out ways through organisations can recover from the disruption. In some cases, recovery preparation is performed in sequence with the first response. The actual recovery stage entails all adopted actions towards returning to normalcy. The final stage, long-term impact, describes the long-lasting devastating effect of the disruption that makes it difficult for organisations to sufficiently recover and return to within range of normal functioning.

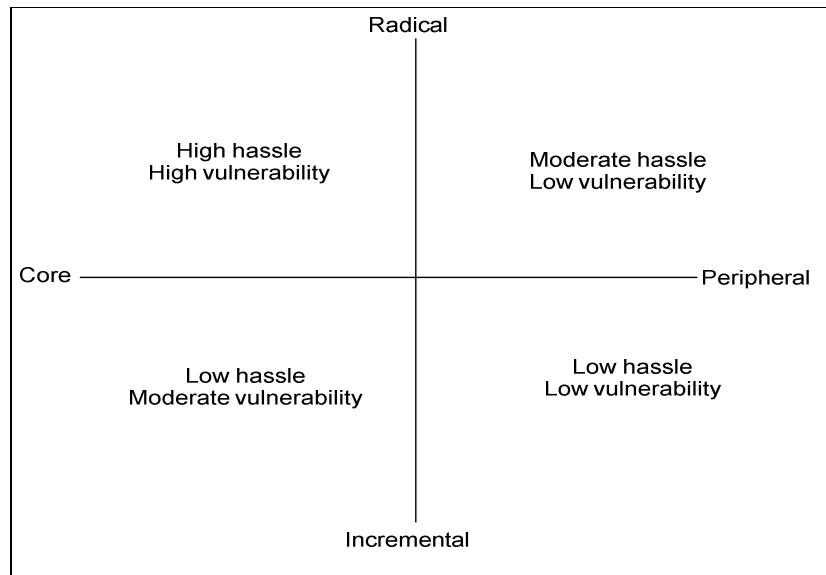
2.4.2.2 Resilience and vulnerabilities

Resilience, in the face of ecological, social, climate and organisational changes, has been reviewed in relation to vulnerability (Adger 2000; Adger 2006; Dalziell and McManus 2004; Gallopín 2006; Smit and Wandel 2006). In relation to organisations, vulnerability can be expressed in terms of financial vulnerability, strategic vulnerability, hazard vulnerability and operations vulnerability (Sheffi 2005b). On the whole “vulnerability factors or markers encompass those indices that exacerbate the negative effects of risk conditions” (Luthar et al. 2000a) and so “resilience research involves a progression from an empirical identification of vulnerability factors to an exploration of processes underlying their effects” (Luthar et al. 2000a). Thereby, studies on resilience building signify a commitment to understanding the factors and processes that underlie the impacts and effects of vulnerable systems or networks (Luthar et al. 2000a). This is because vulnerable systems are more prone to

experience catastrophic or severe failures in their core functions even from the slightest disruptions (Adger 2006). However, because an individual, organisation or community can easily overcome a category of disruptions and become less vulnerable to systems' failure does not guarantee that it would easily overcome another category of disruptions (Gallopín 2006).

Organisational changes that are likely to disrupt an organisation's core functions would as in consequence affect such organisation's capability and capacity to meet its objectives (Buchanan and Boddy 1992). Buchanan and Boddy's (1992) model explored whether proximity (that is, core or peripheral) of which intended organisation changes relate to the organisation's primary functions will impact on the degree of alteration that different types change causes. From this, they highlighted the extent to which each of their derived quadrants would most likely affect organisations' goals and missions (see Figure 9). It was said that a type of change that is radical, but core to an organisation's functioning capacity and capability, will very much alter the status and flow of operations, and thus make the organisation highly vulnerable. It is these types of radical changes that make management or change agents reluctant to implement changes in organisations as they will be held accountable if they fail in their attempts (Griffin 1998; Moran and Brightman 2000). In an instance where the change is radical, attempts should be made to ensure that the associated changes are limited to peripheral functions. In summary, organisational change that would potentially have adverse effects on an organisation's core functions should be incrementally implemented (Buchanan and Boddy 1992).

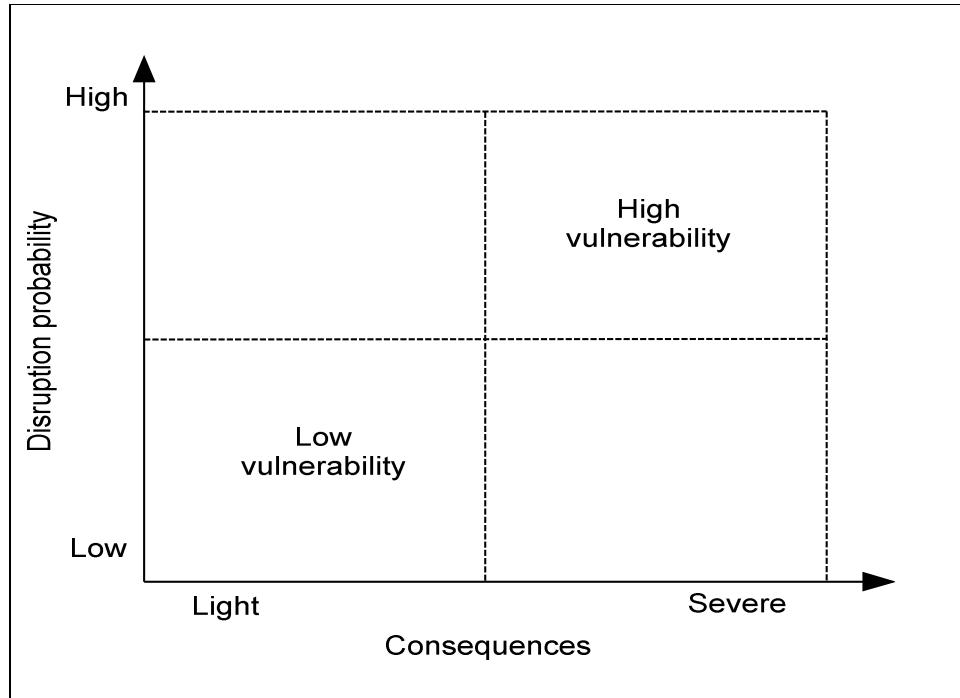
Figure 9: Model of Organisational Changes (Buchanan and Boddy 1992)



In Sheffi (2005b), vulnerability was illustrated as a “combination of the likelihood of a disruption and its potential severity”. In this study, the degree of a systems’ vulnerability was related to the extent of the disruptive events’ impact and the probability that such disruptive events will occur. According to Sheffi (2005b), the vulnerable of a system is highest when the probability of disruption is high and the consequence of the disruption is severe. On the other hand, vulnerability of a system is lowest when the probability of a disruption occurring as well as its consequences assuming the disruption occurs is low, and light respectively. Thus, such an organisation thus is said to have modest vulnerability either from a combination of high probability and low impact or low probability and high impact events (Sheffi 2005b). These relationships are shown in Figure 10. It was further expressed in the study that vulnerability is a function of the company’s resilience and the organisation’s ability to maintain its relational capabilities. Hence, a resilient organisation is expected to have low systems’ vulnerability, because as such they possess the ability to accurately assess the likelihood of disruptions and its associating impacts (Sheffi 2005b). Lastly, an organisation’s capability to recovery shortly after a disruptive event has occurred was stated to be an attribute of organisation’s resilience (Sheffi 2005b). In other words, resilient systems (e.g. supply

chain systems) can be created by managing vulnerability-causing factors (Stecke and Kumar 2009).

Figure 10: Dimensions of vulnerability



The above likelihood-impact dimension is also used to examine the inherent risk that an event that would threaten the normal operation of a system will happen and lead to the systems' eventual failure. According to Frame (2003), the grid offers organisations an approach to categorise risk events. Studies of both constructs, that is risk and vulnerability, are grounded on the predictability or ambiguity that a particular will happen or whether the particular event will happen alongside an unforeseen event (Hillson and Murray-Webster 2007). Hence, risk is used synonymously with uncertainty (Hillson and Murray-Webster 2007), although a slight distinction exists between the construct (Frame 2003; Hillson and Murray-Webster 2007). The difference being that risk has associating consequences what can threaten the existence of organisations while the associating consequences of uncertainty poses little or no risk (Hillson and Murray-Webster 2007).

2.4.2.3 Resilience and adaptation

Adaptation is the process or outcome of a system that signifies that an individual or system has developed ways that will enable the individual or system to cope better, manage and adjust to changing conditions, stress, hazard or opportunities (Smit and Wandel 2006). As such, adaptive actions, processes or outcomes of a system can be reactive or anticipatory (Smit and Wandel 2006). Based on timing, response to change and many more things, there is sufficient evidence to show that individuals, groups of individuals or communities that are ascribed as resilient would have a greater chance to adapt to changes than those that are not (Folke 2006; Walker et al. 2004). For example, it can be stated that losing the capacity to sufficiently adapt simply implies loss of resilience (Folke 2006). As a result, adaptation in relation to resilience is interpreted as the capacity of individuals, organisations or communities in a socio-ecological system to build resilience through collective actions, in instances wherein the ecological, political, social or economic conditions make the existing systems unsustainable (Walker et al. 2004).

2.5 Proposed future directions for organisational resilience-based studies

It is not unusual for researchers to propose or make recommendations for further research in their papers or studies. In the context of organisational resilience, organisations can develop resilience along two themes. Luthans et al. (2006), also proposed and affirmed that these two approaches can be used to develop resilience within the organisational contexts. The authors proposed that under the first theme explained earlier, managements' actions are mostly reactive in nature. From a human resource development perspective, this involves consistently helping employees to think positively and to find self gratifying or positive meanings when negative events occur (Luthans et al. 2006). Under the second theme explained, the authors (Luthans et al. 2006) proposed three human resource development strategies that can help make organisations more proactive. The first strategy relates to having a risk-focussed strategy in place, the second strategy outlines organisations to be asset-focussed by continuously enhancing personal and

available organisational resources, while the third and last strategy emphasises on developing process-focussed strategies that rely on their employees' cognitive abilities (Luthans et al. 2006).

Sheffi (2005b) made mention, that it has become imperative for organisations to become more resilient than their competitors by investing in the capabilities that can enable them to recover quickly from disruptions. More recently, organisational resilience focussed researchers have discussed the need for organisations to adopt human resource management or development approaches in building organisational resilience (Lengnick-Hall et al. 2010). This, they believe, is useful because organisations' ability to successfully respond, adapt and adjust to adverse conditions also creates opportunities for organisations' members to learn from past experience, which is essential for organisational survival (Hind et al. 1996; Lengnick-Hall et al. 2010; Luthans et al. 2006). In addition, learning from past experiences of environmental jolts, enables organisations to learn about the effects of the phenomenon or the jolts and subsequently create opportunities for growth (Meyer et al. 2005). Evidently, organisations are unique and so go through different processes of learning as individual human beings do also (Cyert and March 1963). Hence, future field experimental studies should demonstrate that resilience can indeed be developed along human resource management and/or development approaches (Luthans et al. 2006).

Unfortunately, earlier research has questionably ignored how organisations promote healthy learning and human development responses to change (Callan 1993). Central and key to organisational learning and resilience building, is the type of organisational culture that exists in an organisation (Chinowsky and Carrillo 2007; Schein 1996a; Sheffi 2005b), since learning organisations are likened to be just a variant of culture (Garavan 1997). Nevertheless, the study of organisational culture is broad, complex and has existed for several decades (Martins and Terblanche 2003; Weeks and Benade 2009). Generally, an organisational culture that supports organisational learning is developed over a period of time and emerges in response to employees' cumulative shared learning experience (Tushman et al. 1986; Tushman et al. 1986; Weeks and Benade 2009). Shared learning culture can further

be promoted among employees, when there is culture in which employees openly acknowledge their failure and learn from it (Dyer et al. 2009). Thereby, organisations that want to create an organisational culture that will support the sustenance of the gains of transformational changes must, alongside the change, produce an enabling learning organisational system in which employees' shared experience can be favourably affected (Lengnick-Hall et al. 2010; Tushman et al. 1986). In conclusion, learning is usually a consequence of change and so it can be viewed as one of the characteristics of effective organisational change (Carnall 2007). In the next section, the concepts of learning organisations and knowledge management are explored.

2.6 Learning organisations

Learning is a by-product of employees' willingness to find, explore, analysis and accept other ways of doing ways than those used in the past (Senge 1999). In view of this, learning organisations in simple terms are organisations that work tirelessly towards developing and perfecting the cognitive process of creating, sharing and transferring skills and knowledge that can potentially enhance their ability to achieve competitive advantage over their competitors (Armstrong and Foley 2003; Easterby-Smith and Araujo 1999; Easterby-Smith et al. 2000). Although there exist several descriptions of learning organisations in literature (Heraty 2004), the concept of learning organisations "has since it was coined been ambiguous" (Örtenblad 2004) as learning organisations are usually narrowly defined as organisations that have developed high competency in problem solving (Argyris 1991; Örtenblad 2004). Primarily, a learning organisation is one that constantly strives to "build a working reality of such desirable attributes as flexibility, teamwork, continuous learning and employee participation and development" (Mabey and Salaman 1995). According to Marquardt (1996), a learning organisation is an organisation that stimulates collective learning and "continually transforms itself so as to better collect, manage and use knowledge for corporate success". So, learning organisations are "organisations where people are continually trained to expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are

nurtured, where collective aspiration is set free and where people are continually learning to learn together” (Senge 2000).

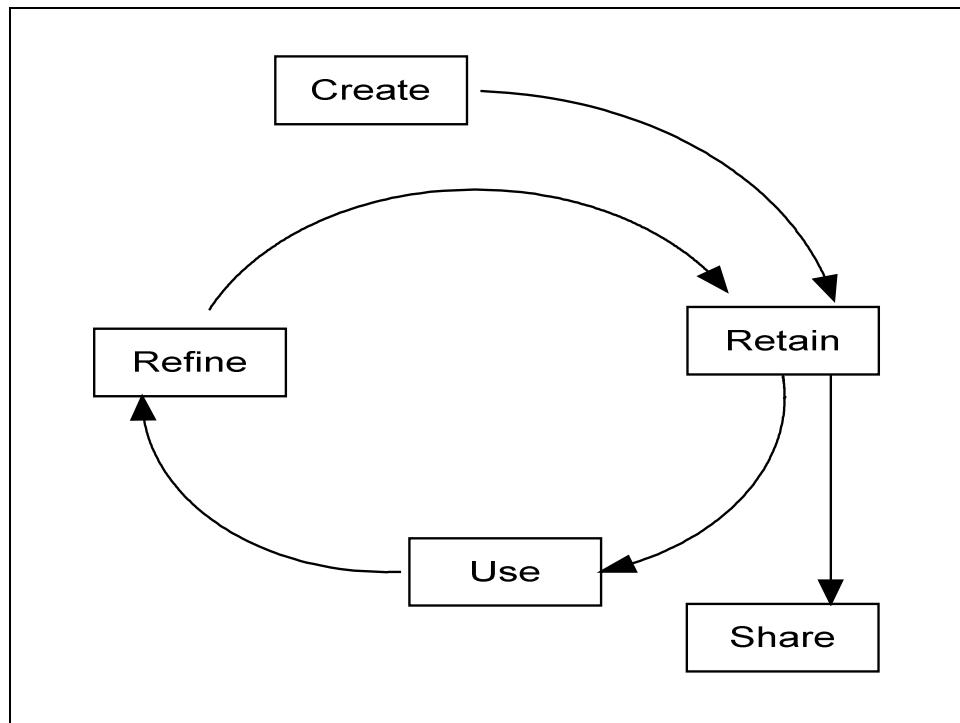
This indicates that a learning organisation would have in existence a: (a) supportive learning environment; (b) concrete learning processes and practices; and (c) leadership behaviour that reinforces learning (Garvin et al. 2008). Similarly, four aspects put together serve as prerequisites for learning organisations hoping to create, use and manage knowledge (Örtenblad 2004). The four aspects are: (a) organisational learning; (b) learning at work; (c) learning climate; and (c) learning structure. In learning organisations, the process of knowledge acquisition, management and sharing involves learning, changing and improving (Garvin 1993). The learning aspect entails gaining new knowledge, continuous learning, learning from mistakes and learning between all members of the organisation. The change portion involves changes in behaviour and changes in the processes used in the organisation based on the knowledge gained. The last bit, which is the improvement part, describes advances in individual performance and organisational performance from actions taken as a result of the learned information. As such, a learning organisation is portrayed as one that learned (Örtenblad 2004). This should however not be confused with organisational learning as the distinction between organisational learning and learning organisations is often unclear as both terms are sometimes used interchangeably (Heraty 2004; Senge 1999; Örtenblad 2001).

Organisational learning and learning organisations centre on the acquisition, interpretation and distribution of knowledge within an organisation (Chiva and Alegre 2005; Garvin 1993; Garvin et al. 2008; Gupta and Govindarajan 2000; Heraty 2004; Korth 2007). Organisational learning and learning organisations do not necessarily imply the same thing, although both are complementary of each other. A distinction was made by Easterby-Smith (2002); organisational learning was reported as the process through which individual and collective learning that takes place within an organisation. Otherwise stated, organisational learning summarises organisations awareness of the need for different levels of learning, storing of knowledge in the organisation and the actual usage of the stored knowledge within an organisation (Örtenblad 2004). As such, organisational learning presents a supportive learning

culture in which individuals' knowledge is stored for further use (Örtenblad 2004) and illustrates the transfer and retaining of knowledge within an organisation (Garvin et al. 2008). On the other hand, a learning organisation was identified as a type of organisation that focuses and remains committed to the development and use of methods and tools that will facilitate and improve the quality of learning processes within an organisation. Thus, learning organisations are explained as organisation types in which their members are continually encouraged to create positive values (Garvin 1993); that is, a place where employees excel at creating, acquiring and transferring knowledge (Garvin et al. 2008).

As learning is multidimensional and the learning processes entails generating, collecting, interpreting and disseminating information (Garvin et al. 2008), the overall objective for initiating an effective knowledge management system in organisations is basically to ensure that the right information is available for the right processor, at the right time and at the right cost (Holsapple and Joshi 2002a; Sabramani and Hahn 2002). Xu et al. (2006) explored the possibility of integrating ERP systems and knowledge management systems using implementations of enterprise resource planning systems. They acknowledged that knowledge management are information systems simply designed to collect, code, integrate, disseminate and facilitate organisational knowledge so that users' may use the knowledge to be more effective and productive. Thereby, studies on knowledge management are usually focussed on how knowledge can be created or acquired, retained, used, refined and shared within or across organisations (Edwards et al. 2002; Edwards et al. 2009; Shaw and Edwards 2005). The resulting findings of these reports cast readers' imagination on documented observations validating knowledge creation; transfer and management processes that are capable of bringing about improved business performance (Von Krogh et al. 2000). Usually, these studies are descriptive and they list institutionalised development phases of knowledge management in the form of life cycles (Alavi and Leidner 2001; Bhatt 2000a; Holsapple and Joshi 2002; Nonaka and Takeuchi 1991; Salisbury 2003; Sarabia 2007). One of such knowledge management lifecycle is shown in Figure 11.

Figure 11: Knowledge management life cycle (Edwards et al. 2009)



Traditionally, as highlighted in this section, learning organisations endeavour to enhance their employees' knowledge, skills and abilities to perform their jobs better (Luthans et al. 2006). In line with this, a knowledge-based organisation is described as an organisation that has sufficiently been able to collectively integrate individual knowledge of their employees towards achieving competitive advantage (Grant 1996; Nonaka and Takeuchi 1991; Spender 1996). Generally, knowledge is of two types, namely: tacit and explicit knowledge (McDonnell et al. 2010; Nonaka and Takeuchi 1991; Polanyi 1962; Xu et al. 2006). Explicit knowledge is discernible, declarative, easy to articulate and can be communicated in a symbolic form or a natural language (Li et al. 2011). However, not all types of knowledge, like an individual or organisation's expertise or experience, are visible or quantifiable (Li et al. 2011). Hence, the second type of knowledge, referred to as tacit knowledge, includes knowledge-types that cannot be readily observed, seen or documented (McDonnell et al. 2010).

Of the two types of knowledge, tacit knowledge normally provides the individual or organisation the needed competitive advantage, because of its uniqueness to an individual or organisation (McDonnell et al. 2010); mainly because tacit knowledge are harder to imitate by competitors or peers than explicit knowledge (Davenport 1998; Hansen et al. 2005; Li et al. 2011; Lubit 2001). To conclude, the researcher adopted Alavi and Leidner (2001) declaration which states that “an understanding of the concept of knowledge and knowledge taxonomies is important because theoretical developments in the knowledge management area are influenced by the distinction among the different types of knowledge”. In the next section, two established organisational theories are explored in an attempt to present a more detailed understanding of systems’ resiliency.

2.7 Similarities between a learning organisation and a resilient organisation

Below are three similarities between resilient organisations and learning organisations:

- i. Resilient organisations are construed as organisations that have over a period of time developed developmental and adaptive capabilities based on their previous experiences and exposures to unfavourable events so as to better respond and adapt to similar experiences and exposures in the near future (Sutcliffe 2011; Lengnick-Hall et al. 2010). Likewise, learning organisations depict manifested end-results and capabilities of organisations that have infused past experiences and exposures in the form of lessons learnt into their cognitive process of perfecting their ability of better responding and adapting to situations in terms of knowledge creating, sharing and usage (Armstrong and Foley 2003; Marquardt 1996)
- ii. As explained earlier and will also be confirmed later in this study, organisational resilience is significantly dependent on cumulative personal resilience levels of employees in organisation, which in return is reliant on emotional climate (Bus et al. 2009; Cohn et al. 2009; Coutu 2002; Davydov et al. 2011; Tugade and Fredrickson 2007). So also, the extent to which an organisation can be taken to be a learning organisation is subject to the extent to which the organisation has created a contributory team working

environment that can essentially create positive mental models (Oudejans et al. 2011; Van den Bossche et al. 2011).

- iii. Either directly or indirectly, both resilient organisations and learning organisations determine with certainty to undergo or take in series of different self-enabling processes and functionalities that would positively impart their skills and knowledge capacity to deal with evolving operational risks and dysfunctions. (For further read on this, read Gittel et al. 2006; Sheffi 2005; Senge 1999).

2.8 Organisational development theories

Organisational development theories are conceptualisations and models of organisations that are used to explain and predict the organisation's composition and behaviour (Grant 1996). To better explain organisation development theories and its relation to understanding organisations, it is approached from two angles. Firstly, the several concepts of organisations are discussed in relation to systems theory. Organisational systems, generally, are well-integrated functional units that are seamless, as they co-exist, overlap and inter-relate. As organisational systems are complex entities (Camarinha-Matos and Afsarmanesh 2007; Camarinha-Matos et al. 2008; Levy 1994), organisations are seen as open, dynamic, non-linear systems that have organising attributes with which they are able to perform multiple interactions and functions (Thietart and Forgues 1995). Secondly, chaos theory and systems theory are both explored in order to help define the complexity of systems in relation to its unpredictable nature. These two types of theories present deeper insights on how organisations are composed, structure and how they work (Thietart and Forgues 1995), as they present theoretical analysis that offers better explanations and predictions on organisations' behaviours (Feichtinger 1996; Levy 1994).

2.8.1 Systems Theory

A system is an entity that consists of different parts bounded by common similarities, rules, or aspirations that interact with each other and/ or function as a whole

(Bechtold 1997). Thus, systems theory delineates systems' interrelationship, interdependence and complexity nature of systems (Bussolari and Goodell 2009). In view of this, systems theory is principally targeted at studying systems dynamics, interconnections and control of systems (Sule 2003) in an attempt to yield great insight into how complex, organic-like structures can evolve order and purpose over time (Dooley 1997). It does this by disassembling large complex systems into correlative smaller subunits in an attempt to function better or provide for better analysis (MA and MA 2009). There are different representations of systems theory that broadly apply to both intangible and tangible objects (Caddy and Helou 2007); examples include Miller's Living Systems Theory (Miller 1978) and the Beer's Viable System Theory (MA and MA 2009), General System Theory (Caddy and Helou 2007) and Grey System Theory (Wang 2011).

Generally, system theory is used to present an outline of how systems develop self-automated control mechanisms so as to maintain the system's behaviour at some desired goal (Dooley 1997). Caddy (2007) represented Yourdon's (1989) four principles of systems theory regarding information systems. The principles are that: (a) the more specialised or complex a system, the less adaptable it is to a changing environment; (b) the larger the system, the more resources are required to support it, with the increase being non-linear rather than linear; (c) systems often contain other systems or are themselves components of larger systems; and (d) systems grow over time, both in terms of size as well as structural complexity. Just as Caddy (2007) justified that these four principles are applicable to supply chain management, they can also be used to better understand the concept of resilience. In fact, according to Ungar (2004), the study of resilience, especially considered from an ecological viewpoint, is largely based on systems theory. This view was also shared by Fiksel, for organisations that desire to design and develop resilient sustainable systems (2003);

2.8.2 Chaos Theory

The concept of chaos theory was said to have been triggered by Ruelle and Takens' (1971) claim that a physical system tends to remain at a state of equilibrium when

not under an external influence, but starts to steadily generate unexpected random behaviours under different conditions (Thietart and Forgues 1995). Bussolari and Goodell (2009), Sellnow (2002), thought otherwise though; the authors rather attributed the starting point of chaos theory to Lorenz's (1963) study. Lorenz (1963), it is said, was the first to attempt to understand the real meaning of chaos by creating mathematical equations to predict long-range weather forecasts. By rounding up a number from six decimals to three decimals, Lorenz's results significantly changed (Bussolari and Goodell 2009). Hence, Lorenz was cited by Bussolari and Goodell (2009) to have declared that "very small changes could greatly alter an end result or an emergent pattern", which further highlights the non-linear dynamic nature of non-linear processes impacting measurable features that manifest across a range of time scales (Levy 1994; Sellnow et al. 2002; Woyshville et al. 1999). The degree of this change is delineated as exponential (Janecka 2007). This implies that chaos theory describes a systems ability to transform itself to a higher level of complexity and thereafter adopting self-organising dynamic to reorder its structure so as to better handle the changes it goes through (Bechtold 1997).

To better understand chaos theory, it is important to distinguish between chaos and crisis. Organisational crisis is "a low-probability, high-impact event that threatens the organisation's survival and is characterised by ambiguity of cause, effect and means of resolution, as well as by a belief that decisions must be made swiftly" (Pearson and Clair 1998). Whereas, a chaotic situation in an organisation would imply a complete state of randomness, disorderliness and unpredictability of existing systems' relationships and its associated linkages in observed complex, adaptive organisational systems (Wilding 1998). Therefore, the main difference between chaos and crisis is that chaos is deterministic while crisis is not (Wilding 1998). This means that chaos "is generated by fixed rules that in themselves involve no element of chance" (Wilding 1998). This is to say, "in theory, therefore, the system is predictable, but in practice the non-linear effects of many causes make the system less predictable" (Wilding 1998). And so, knowledge of chaos theory offers change initiators the opportunity to make sense of, and predict, organisations' random, disorderly and unpredictable behaviour "more than was originally thought" (Wilding 1998).

Taken that at every instance an individuals or organisation will try to make sense of their crises (Weick 1993), an understanding of chaos theory is key to understanding and “developing guidelines and decision rules to cope with complexity, and for searching for non-obvious and indirect means to achieving goals” (Levy 1994), primarily because of the assumption that chaos theory is driven by deterministic rules (Levy 1994; Thietart and Forgues 1995). “Chaos theory represents a loosely related body of concepts, including sensitive dependence on initial conditions, bifurcation, self-organisation, fractals, and strange attractors, that seek to describe the behaviour of non-linear systems at higher levels of complexity” (Sellnow et al. 2002). Thereby, chaos theory runs contrary with organisation theories that are based on “implicit assumption of stability and a quasi-mechanistic view of organisations” (Thietart and Forgues 1995). In reality, organisations are non-linear dynamic systems (Feichtinger 1996; Thietart and Forgues 1995). This denotes that organisations are multifaceted, dynamic systems, in which random coupling counteracting forces of change cause such systems to oscillate between a continuous series of convergence and divergence, stability and instability, evolution and revolution processes (Thietart and Forgues 1995).

In line with this, a chaotic system will undergo several distortions and in most cases cannot fully return back to the same exact pre-distortion state (Levy 1994). According to Levy (1994), this happens because as distortions happen the small disturbances gets multiplied and in return causes the systems to become disorderly by further destroying the nonlinear dynamic nature of systems. This explains why it is said that chaos theory does not support prediction and forecasting of complex systems (Levy 1994; Sellnow et al. 2002), but presents opportunities through which a holistic view of dynamic nonlinear dynamic systems can be better understood (Sellnow et al. 2002). In other words, based on chaos theory, organisations are well aware, and can plan well ahead, of disruptions and there implications to desirable outcomes (Feichtinger 1996; Levy 1994).; thus minimising the effect of the disruption on the organisations’ systems (Levy 1994). In effect, chaos theory has been used to expand the applications of systems perspective to the non-linear operation of large complex systems (Sellnow et al. 2002). Examples of such studies have applied

chaos theory to system-wide analysis of crisis communication in a cancer treatment, natural disaster, supply chain management, economics, fluid flow turbulence, strategy management, affective instability, chaotic behaviours of management systems and many more of such (Bechtold 1997; Janecka 2007; Levy 1994; Rasmussen and Mosekilde 1988; Ruelle and Takens 1971; Sellnow et al. 2002; Stacey 2007; Woynshville et al. 1999).

In a 2009 study, chaos theory was proposed as a model which counsellors working with individuals experiencing life transitions can use in considering disorder, unpredictability and lack of control as normal parts of transition processes (Bussolari and Goodell 2009). Regarding this, the authors deduced that since life's (or organisation's as the case maybe) experiences are nonlinear and ever-changing, "chaos theory offers a more adequate model for articulating and understanding a positive, strength-based psychological view of people as potentially resilience and adaptive systems, even in the face of extremely challenging experiences" (Bussolari and Goodell 2009). This is similar to resilience based studies conducted along psychological science perspective discussed earlier. In conclusion, managing complexity and randomness in organisations is essentially the art of maintaining such organisations at the edge of chaos and still being able to produce creative outputs like resilience (e Cunha and da Cunha 2006)

2.8.3 Relevance of systems' theory and chaos theory to this study

The researcher considers both systems theory and Chaos theory to be relevant to resilience-based studies based on the reasons:

- i. Considering that Systems theory relates how closely knitted organisations elements are (Bechtold 1997; Dooley 1997) and Chaos theory theorises emphasises the need to understand that a change in a major organisation element or subsystem would most likely in return create varied magnitude of changes in linking organisation elements or subsystems (Sellnow et al. 2002; Levy 1994), an understanding of both theories would significantly help change agents to better understand the impetus of managing unplanned and evolving organisation-wide changes (Thietart and Forgues 1995; Levy 1994).

- ii. Since the process of building resilience into changing systems is a by-product of an organisation's self adjusting capacity to predict causal impacts of future risks, adversities and threats to their survival (McManus et al. 2007; Folke et al. 2006), both Systems theory and Chaos theory would help change agents better understand an organisation's systems behaviours so as to be able to create multilevel perspectives to building organisational resilience. (See Masten 2007; Masten and Obradovic 2008 for similar arguments). Therefore, both theories would importantly contribute to aiding organisations develop capacities required to recover or return their organisation elements or subsystems back to a state of equilibrium (Compare with Ponomarov and Holcomb 2009; Holling 2009).

2.9 The research gaps

The major challenge of resilience building is the process of developing an approach through which individuals, organisations or communities can build or improve on their learning capabilities and knowledge management, particularly when confronted with disruptive alternative and uncertain occurrences (Folke 2006; Luthans et al. 2006). Another challenge "focuses on how to both retain knowledge within the organisation and establish continuous human resource development throughout all levels of the organisation" (Chinowsky and Carrillo 2007). The implication of these two challenges is that the task of finding various learning experiences that promote and provide for learning at work has been acknowledge to remain an overwhelming task (Heraty 2004). Existing studies that have attempted to resolve these problems are believed to be too conceptual rather than been empirical, in addition to the fact that organisational learning inclined studies from an international context still remain under-researched (McDonnell et al. 2010). Further studies should present a causal strategic human capacity training model of how organisational resilience can "sufficiently aid efforts to re-establish a strong fit between the firm and the new reality" (Lengnick-Hall et al. 2010). For example, the development of training models creates an avenue for organisations to prepare their members to build up capacities and test suitable response actions, by helping to develop positive reinforcement,

favourable perceptions and technical proficiency under extreme conditions (Lengnick-Hall et al. 2010).

In the last two decades, researchers have carried out quite a number of studies through which employees' reactions and readiness to support organisation-wide changes can be better understood (van Dam et al. 2008). Employees' readiness to support organisation-wide changes is illustrated as an individual's receptivity to change (Pasmore and Woodman 1997). This means that employees' readiness to change exemplifies "the extent to which employees hold positive views about the need for organisational change (that is, change acceptance), as well as the extent to which employees believe such change are likely to have positive implications for themselves and the wider organisation" (Jones et al. 2005). However, as it has been suggested (e.g. by Weber and Weber 2001), there still remains a dearth of literatures that articulates the part of employees' readiness to support organisation-wide changes in building organisational resilience. This is because a number of existing organisational resilience-based studies (e.g. Gittell et al. 2006; Ponomarov and Holcomb 2009; Sheffi 2005) though highlight that organisations undergo different organisation-wide changes in view of building in adequate resilience that would help organisations quickly pull through disruptive changes, these studies hardly report the role of employees' readiness to support such organisation-wide changes.

There is also need for future studies that will uncover and assess long-term managerial impacts on employees' readiness to support organisation-wide (Pettigrew et al. 2001; Zhou et al. 2006). These additional studies should be empirical and help develop or add insights on the sustainability of organisational changes (Zhou et al. 2006). It is believed that such further work and analysis will establish other organisational attributes and associations are essential to shaping employees perceptions (Jones et al. 2008), and may identify extra opportunities needed to swiftly resolve organisational change challenges (Weber and Weber 2001). Weber and Weber (2001), indicated that such a future research that draws attention to relating employee coping attitudes and organisation's adaptive strengths to adverse disruptions will contribute to existing literature, in that it will create additional opportunities for management to improve on the success of organisational

change initiatives. Organisational change success is, however, influenced and dependent on how individuals perceive the frequency of change, the planning involved and impact of change (Rafferty and Griffin 2006). Furthermore, it is characterised by the degree and level of employees' adjustment and adaptation to organisational changes (Jimmieson et al. 2004; Martin et al. 2005), employees' prolonged positive attitudes and behaviours (Meyer and Stensaker 2006), and lastly, the "allocation and development of change and operational capabilities that sustains long term performance" (Meyer and Stensaker 2006).

Employees' past experience of organisation-wide changes is crucial to ensuring that employees' adapt and adjust to future organisation-wide changes (Balogun and Johnson 2004; Balogun et al. 2004a). In Vokala and Nikolaou (2005), it was recommended that future studies should highlight the need for management to continue to actively ensure that increased demands placed on employees, as a consequence of organisation-wide changes, are counteracted with sufficient support. Moreover, this type of future research will conveniently establish other organisational attributes that are important in shaping employees' perception to organisation-wide change in settings where the proposed organisation-wide change threatens the continuity of the organisations (Jones et al. 2008). More than ever, the onus is on organisations to ensure that their employees' are comfortable and ready to positively alter their perception and behaviour as and when warranted, during and after the changes (Avey et al. 2008; Balogun and Jenkins 2003; Balogun and Jenkins 2003; Balogun et al. 2004a; Pasmore and Woodman 1997).

This has however been proven to be a daunting task; mainly because employees would, over the years, have become so attached and conformed to their old ways of working that they find it difficult to disengage and let go (Amiot et al. 2006). Another reason is that, more often than not, employees perceive that organisation-wide changes will result to some form of personal loss (Amiot et al. 2006; Avey et al. 2008). Besides all these reasons, there is also scant literature on empirical organisational resilience studies (Sutcliffe and Vogus 2003) that take into consideration how the dynamic nature of resilience can contribute to establishing whether employees' readiness to support organisation-wide changes can be

positively influenced by organisational resilience. Put differently, only in the past decade have organisational resilience-centred studies sought to explain how organisations can develop functions that will enable them to operate optimally within the context of fundamental organisation-wide changes (e.g. Hamel and Valikangas 2003; McManus et al. 2007; McManus et al. 2008; Weeks and Benade 2009). That is to say, there were hardly any resilience-based studies that empirically established the mediating role of stress coping mechanisms in increasing employees' receptivity to planned large-scale organisation-wide changes, in relation to building organisational resilience.

It was put forward by Luthans et al. (2006) that future research should go beyond proving that employees' resilience brings about improved performance. Rather, future resilience studies should empirically try to establish how resilience influences organisational commitment, job satisfaction, employees' wellness and other organisational citizenship attributes. At the same time, such future studies should be targeted at helping organisations identify and develop core values that will prove needful as such organisations evolve through organisation-wide changes (see Tushman et al. 1986). This is because organisational capabilities are additive composites of individual capabilities (Ashmos and Huber 1987; Lengnick-Hall et al. 2010).

As such, considering that resilience of employees is related to their performance and that of their organisation (Lengnick-Hall et al. 2010; Luthans et al. 2005; Luthans et al. 2007), it will turn to be of immense contribution if future research can pinpoint specific actions, through which organisations can seek to develop such resilience in their employees, in order to make themselves more adaptive and successful over time (Luthans et al. 2006; Youssef and Luthans 2005). In summary, this research study seeks to assess the role of organisational resilience in helping individuals adapt and adjust over time after major organisation-wide changes, in addition to maintaining long-term performance. More specifically, there is no single study on how Nigerian organisations can develop organisational resilience after major organisational changes.

2.10 The research hypotheses

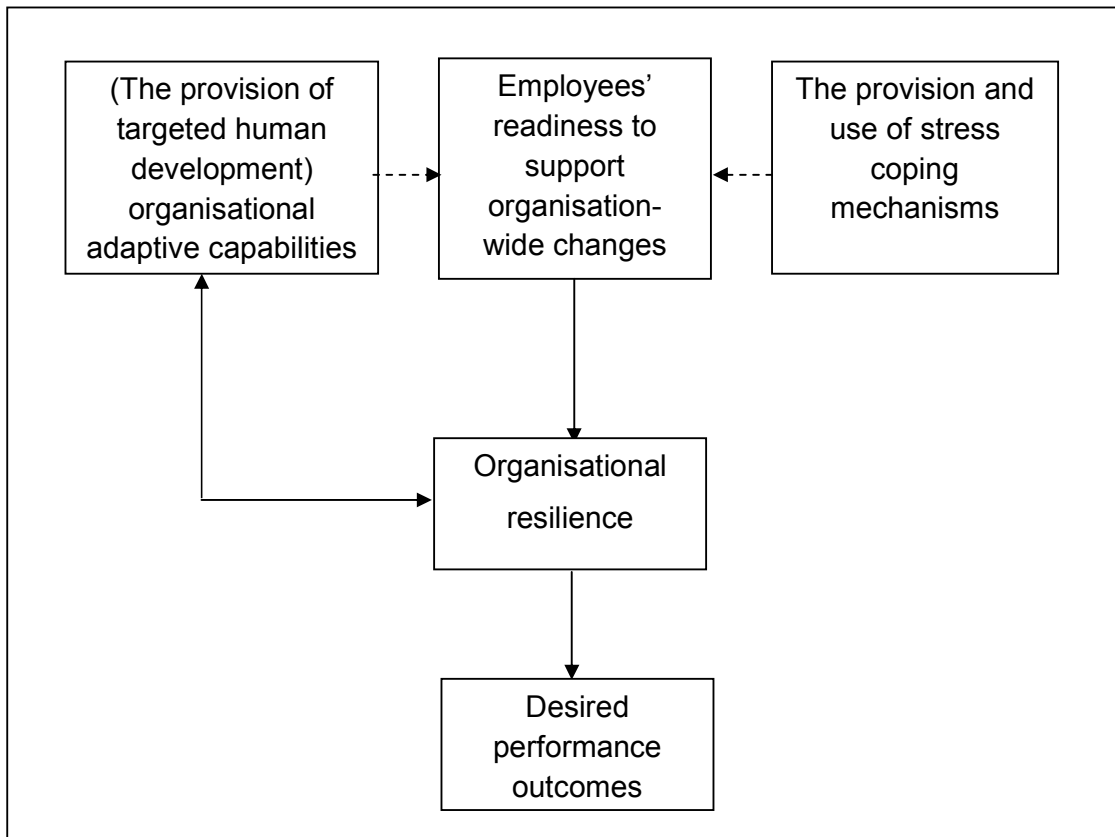
From this literature review, the main research assumption to be established in this study is explained as follows. According to Tushman et al. (1986), a changed system that exists within the old contextual conditions cannot be easily sustained. However, researchers think that when the contextual conditions are modified in line with the transformational change, employees will, over a period of time, gradually alter their old behavioural attitudes and subsequently adapt to such changes. Although Horne and Orr (1998) indicated that resilience of organisational members does not necessarily result to building resilience at the organisation level, other resilience-focussed researchers have, however, established that resilience at both individual and organisational levels are interlinked and complementary of each other (Mallak 1998; Riolli and Savicki 2003).

This means that organisational resilience is a reflection of individual members' resilience and human development (Luthans et al. 2006; Youssef and Luthans 2005). In other words, accumulation and synergy of resilient individuals within an organisation will to a great extent positively aid and influence how organisations can respond, absorb and recover from disruptions (Lengnick-Hall et al. 2010). Similarly, as established in the earlier part of this review, organisational adaptive capacity or capability has been effectively disclosed to be one of the crucial success factors for building organisational resilience. Furthermore, as stated earlier, employees will resist organisation-wide changes and as a result would not be motivated to support such change (van Dam et al. 2008).

The inability to manage such resulting resistance might aggravate and cause fatal disruptions to organisations and likewise impact negatively on organisations' collective ability and capacity to become resilient (Lengnick-Hall et al. 2010). Thus, building on the concept that individual resilience and organisational adaptive capability will significantly assist organisations to achieve desired performance outcomes after organisation-wide changes (Dalziell and McManus 2004; Lengnick-Hall and Beck 2009; Stephenson et al. 2010), it is hypothesised that employees' readiness to support organisation-wide changes will have a positive influence on

organisational resilience. Accordingly, it is hypothesised that employees' readiness to support organisation-wide changes can be positively influenced through (a) the provision and use of stress-coping mechanisms, and (b) the existence of targeted human development organisational adaptive capabilities such as the creation of a learning culture, belief in leadership, clear delegation of responsibilities, fair allocation of resources and so on. The assumed relationships are presented diagrammatically in Figure 12.

Figure 12: The research framework for this study



Other to-be validated hypotheses listed afterwards were developed as the research progressed and evolved, which is right from the literature review, through the pilot and survey study, to the interviewing of the senior managements in all the case organisations. Based on the transcribed data from the pilot study conducted in this research, representative descriptions of important and relating issues discussed by respondents (i.e. the item constructs of the research themes) were first broadly grouped. Thereafter, these were then reduced to five central research themes.

Hence, the to-be validated hypotheses are assuming relationships between or among the five research themes and the item constructs. The hypotheses are:

- i. Hypothesis 1: A positive correlation exists between employees' non-interest in their organisations' ability to successfully implement organisation-wide changes: and: (a) employees' resentment based on past experience; (b) employees' non-supportive behaviour.
- ii. Hypothesis 2: A positive correlation exists between employees' attitude based on perceived change benefits and effective communication.
- iii. Hypothesis 3: A positive correlation exists among employees' attitude based on perceived change benefits, effective communication and employees' loyalty.
- iv. Hypothesis 4: Employee' attitude based on perceived change benefits, effective communication, employees' loyalty and employees' affective communication of employees towards their organisation have a positive relationship with employees' readiness to support organisation-wide changes.
- v. Hypothesis 5: A negative correlation exists between employees' resistance to organisation-wide changes and the provision of individualised/ social support.
- vi. Hypothesis 6: A negative correlation exists between employees' non-positive behaviours based on perceived change benefits and the existence of a learning culture in organisations.
- vii. Hypothesis 7: A negative correlation exists between employees' non-positive behaviours based on perceived change benefits and employees' affective communication of employees towards their organisation.

- viii. Hypothesis 8: A negative correlation exists between employees' non-positive behaviours based on perceived change benefits: (a) clearly defined delegation of roles and responsibilities, and (b) belief in leadership.

- ix. Hypothesis 9: A positive correlation exists between provision of individualised/ social support (PRIS) and employees' affective commitment towards their organisations.

- x. Hypothesis 10: A positive correlation exists between employees' readiness to support organisation-wide changes and organisational resilience.

- xi. Hypothesis 11: A positive correlation exists between organisation adaptive capacity and organisational resilience.

- xii. Hypothesis 12: A positive correlation exists between employees' readiness to support organisation-wide changes and provision and use of individualise and social support

CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The accuracy of the outcome of a research investigation depends largely on the systematic approach, principles and procedures of inquiry adopted by the researcher in resolving the proposed research questions and hypotheses (Yin 2009). As such, a discussion of research designs and methodology typically focuses on the selection and design of appropriate methods of analysis and research processes, which in return is believed will guarantee that adequate information is collected to conclusively and correctly address the research questions and hypotheses. Therefore, this chapter discusses: (a) the different types of research types, methods and approaches; (b) commonly made research assumptions and research paradigms and (c) the philosophy of research designs in relation to research methods. The adopted research strategy for this study is presented.

3.2 Research design

There are many ways through which research can be done; thereby making the process of choosing an appropriate research design quite a significant aspect in research (Singleton et al. 1988; Yin 2009). A good research design will not only guarantee that the researcher obtains valid answers and correct causal inferences founded on reliable observations and theories or relationships from his/her acquired data, it will in addition ensure that the research findings are generally-accepted, dependable and consistent (Creswell 2007; Singleton et al. 1988). In summary, a good research design will undoubtedly assist a researcher to: (a) back up his/her reasons for doing a research, (b) to decide how best he/she can conduct a research, (c) recognise what types of information/ data that will be most needful during the research process, (d) choose how such information/ data will be collected, and lastly (e) select the suitable ways through which data can be analysed and presented (Creswell 2008a; Graziano and Raulin 2006; Remenyi et al. 1998; Singleton et al. 1988).

The preference for a particular research design, (that is, the framework for collection and analysis of data as defined by Bryman and Bell 2007), is however, not entirely reliant on the method adopted, but rather depends greatly on the logic of the research (Yin 2009). Despite the fact that different research designs might use the same methods (which is the technique for data collection as noted by Bryman and Bell 2007), the principal reasons and motivations for using these same methods under different research designs will be different. For example, two different types of research design can both adopt a case study research design except that the logic for this method in each of the research designs will be dissimilar. So, it would be wrong to condemn a researcher's adopted research design save for the strategy or logical sequence of activities that he/she adopts (Morgan 1983; Sekaran 2003). What really matters is that a researcher does his/her study in a convincing and integral manner that reinforces all the arguments used in convincing his/her audience that the adopted research design is most fitting among other alternate options (Lang and Heiss 1984). To sum up, "a researcher has to be able to convince an audience of the value and relevance of his or her research efforts" (Remenyi et al. 1998).

Generally, a research design serves as a guide of how researchers intend to carry out their investigations (Neuman 2003). Creswell (2008a) likened it to be a researcher's plan and proposal on how to conduct his/her research. In other words, a research design is regarded as a research's blueprint, in that it illustrates the linkages between the intermediary processes that researchers undertake in view of answering their proposed research designs (Yin 2009). Typical intermediary processes would normally entail sample selection, data collection, data analysis, discussion and validation of results. Hence, Yin (2009), stated that a research design is the logical approach that researchers adopt to resolve their research problems and at the end would enable them to draw inferences based on the relevant data analysis results. Hence, an appropriate research design helps a researcher provide reliable answers to the following (Walliman and Baiche 2005):

- What the research is going to do?
- Why the research is going to do it?
- How the research is going to do it?

- When the research will be conducted?

Similarly, Mouton (2001) observed that research designs would normally outline:

- What kind of study is planned?
- What would the anticipated results be like?
- What sort of evidence is required?
- How the evidence will be used to address the research questions adequately?

In line with this, Grinnell and Unrau (2010) defined research design as a structural enquiry framework which researchers adopt to proffer solutions to social problems. Thus, research design deals with the rationale and manner in which social problems are logically solved (Yin 2009). As it was suggested by Yin (2009), there are five components of a research design, namely:

3.2.1 The study's research questions

This study's research questions have been presented in section 1.7. Defining a study's research questions is probably the most influential component of research designs (Creswell 2008a; Marshall and Rossman 2006; Miles and Huberman 1994; Neuman 2003; Yin 2009). This is because research questions help in narrowing down what and how researchers decide to carry out their investigation (Bryman and Bell 2007). Yin (2009) indicated that an appropriately defined research question would have a substance (which explains what the study is all about) and form (that is, identifying whether the enquiry is best answered, with either a "who", "what", "where", "why, or "how" question). According to Creswell (2008a), such an approach (for instance, starting a question with "how" or "what") pose questions that allows researchers to describe variables as the research progresses. In the same view, Marshall and Rossman (2006) stated that research questions could be:

- Exploratory research questions: that are framed in such a way that will enable the researcher to discover relatively unknown phenomena;
- Explanatory research questions: which seek to explain observable patterns and/or phenomena
- Descriptive research questions: these describe identifiable factors and phenomena;

- Emancipatory research questions: which are used to engage in social action regarding a phenomenon (Creswell 2008a).

3.2.2 The study propositions

According to Creswell (2008a), these are testable arguments either deduced from theory or preliminary findings of a research. Generally, a study's proposition is in two-halves – the research proposition (which is usually positive) and the null proposition (which is always negatively worded). This implies that null research hypotheses can be tested alongside the research hypotheses. As an example, the null proposition of a researcher would state that there exists no substantial relationship among the variables observed, while the alternate or research proposition would state that a relationship does exist (Creswell 2008a). In this research, the research propositions were supported with existing theory. Developing propositions in such a manner helps to organise the research process and to define alternative explanations to be examined (Yin 2009).

3.2.3 The unit of analysis

Units of analysis are often used interchangeably as cases in research design or methodology texts (Gomm et al. 2000; Neuman 2003). A study's unit of analysis could either be expressed in terms of an individual, groups of individuals, an entire firm or a group of firms (Davis and Marquis 2005; Eisenhardt 1989b; Neuman 2003; Stake 1978; Yin 2009). That is to say, a research can have a single or multiple units of analysis depending on the research questions (Eisenhardt 1989a; Yin 2009). Thereby, a study's unit of analysis helps to refine, limit and narrow in on the context and scope of data collection of a research (Yin 2009). This means that a well explained unit of analysis would typically describe the object or target of a social inquiry (Stake 1978) in relation to which types of data are needed to be collected and/or analysed (Gomm et al. 2000).

In addition, a research unit of analysis broadly outlines the amount of detailed information that the researcher needs to get (Gomm et al. 2000). This suggests that having a plainly marked unit of analysis reduces the chances of researchers

becoming overwhelmed (Eisenhardt 1989a) and thus enables them to set out what truly needs to be investigated and what can possibly be investigated (Yin 2009). In Stake's (1978) words, properly defined a unit of analysis enables researchers to set out boundaries for their studies by presenting them the opportunity to prioritise what is and what is not the case of interest. Similarly, Yin (2009) and Voss (2002) did make mention that an instance whereby a researcher finds it difficult to clearly identify his/her unit(s) of analysis is an indication that the research questions are still vague and needs to be worked upon.

This study's unit of analysis was determined by setting research boundaries (Miles and Huberman 1994). For this reason, Yin (2009) recommended that a research's unit(s) of analysis be determined by repeatedly asking and answering questions that would in the end help to discuss and justify the reasons for selecting the stated unit(s) of analysis. This technique was adopted in this study. Hence, the unit of analysis of this study are: organisations actively engaged in the oil and non-oil sectors in the south western part of Nigeria, that have been in existence for more than 5 years, have recently implemented or are currently implementing organisation-wide changes and have shown relevant evidence (e.g. historical, relational or financial evidence) that they are able to maintain long-term performance amidst disruptions.

3.2.4 The logic linking the data to the propositions

The logic linking data to a research proposition expounds the rationale binding the systematic and analytical approaches taken by the researcher to analyse their data. In Miles and Huberman's (1994) words, this is the outlined motivation and analytical progression of a research from exploring a research data to describing a research data and finally to explaining the research data. In view of this, a clearly defined and stated logic linking the data to the propositions enables researchers to continually envision and check: (a) what the research is all about; (b) what type of data is needed so as to suitably answer the research questions; (c) whether the acquired data are relevant; and (d) how the research is proceeding so that researchers are able to understand and explain coherently why the phenomena being observed occurs (Miles and Huberman 1994; Yin 2009). Furthermore, a properly ordered and

construed logic linking research data has many benefits, some of which are allowing researchers to see where further analysis still needs to be done and making it easier for researchers to compare different data sets (Miles and Huberman 1994). Mixed methods research was adopted for this research, because it is a method that guarantees that research data are analysable and linked to the research propositions (for further explanations, read Creswell and Clark 2006; Leech and Onwuegbuzie 2009; Tashakkori and Teddlie 1998; Tashakkori and Teddlie 2003; Teddlie and Tashakkori 2006).

3.2.5 The criteria for interpreting the findings

The criteria for interpreting the findings of a research study differ depending whether the analyses were qualitatively or quantitatively done. For quantitatively analysed research, there are rich evidence and supporting literature of acceptable criteria for affirming or accepting research findings. Since the research adopted a mixed methods research, the criteria used for interpreting the findings of the quantitative part of the research are explained in detail later in this chapter. Yin (2009) suggested the use of rival explanations, pattern matching, explanation building of every case considered, cross-case synthesis and time-series analysis of the process adopted for interpreting the findings. Similarly, Miles and Huberman (1994) advocated noting variations, patterns and/or themes and building a logical chain of evidence. Both approaches include, but are not limited to, checking for representativeness of research data or process, triangulating and getting feedback (Miles and Huberman 1994). All these recommendations were adopted in this research, because it allowed the researcher to also verify that the adopted techniques, processes or procedures were valid.

3.3 Research methods

There are various types of research methods that researchers can use. For example, Yin (2009) suggested experiments, surveys, archival analysis (history) and case study; Singleton et al. (1988) proposed experiments, surveys, field research and the use of available data, ethnographies, grounded theory, case study and

phenomenological study. Many more of such examples abound. Several researchers have explained and proposed criteria for choosing research strategies under different research designs. Normally, it is presumed that researchers would use various key criteria as a basis for comparisons in the choice of research methods. Remenyi et al. (1998) revealed that the research question, costs or budget available to the researcher, time available and target date for completion, and the skills of research are assumedly the four predominant factors that influence the choice of research methods and/or strategies. In another case, the criteria for selecting appropriate research methods were founded on the type of research questions, the extent of control an investigator has over actual behavioural events and the degree of focus on contemporary as opposed to historical events (Yin 2009). In view of this, a summary of investigators' choice of research methods considering these three criteria is presented in Figure 5.

Table 5: Relevant situations for different methods (Yin 2009)

Method	Form of Research Question	Requires Control of Behavioural Events	Focuses on Contemporary Events?
Experiment	How, why?	Yes	Yes
Survey	who, what, where, how much?	no	yes
Archival Analysis	who, what, where, how many, how much?	No	Yes / no
History	how, why?	no	No
Case Study	how, why?	no	yes

A brief description of each experimental, survey and case study research methods is presented in the next sub-sections; and a schematic comparison of the three research methods offered by Creswell (2008a) is presented in Table 6:.

3.3.1 Experiments

Miles and Huberman (1994) described experiments as a research type in which the researcher manipulates the conditions of a small select set of research participants, but leaves another set of research participants and then compares the mannerisms of both groups so as to establish whether the conditions imposed on the first group has any effect on them. This is in support of Yin's (2009) claim that experimental research methods are commonly used in research settings in which the researcher can directly, precisely or systematically manipulate the behaviours or conditions of their research. As such, in an experimental research method, the researcher modifies one aspect of the research and then compares an outcome to what existed without the modifications (Neuman 2003). For this fact, experiments are best used in research scenarios where in the researcher desires to explain the effect of one or more independent variables on the dependent variable (Creswell 2008a; Neuman 2003). Usually, it is more directed towards positivist research paradigms (this is explained later). Depending on the setting in which experiments are conducted (Graziano and Raulin 2007), experiments are either laboratory or real-life or field settings based (Neuman 2003; Yin 2009). Since it is hard to control all select research participants and/or control variables at the same time, researchers tend to have more control in experiments conducted in laboratories than in a real-life context (Lang and Heiss 1984; Yin 2009). For this reason, experimental research method was not used in this research.

3.3.2 Survey

Survey research methods are used by researchers wishing to investigate how a large number of research participants perceive, respond or interpret similar conditions or objects of interest (Neuman 2003). With survey research methods, researchers are able to derive answers to dozens of questions at the same time within a short time frame (Neuman 2003). The use of survey research methods

affords researchers the opportunity to test multiple hypotheses simultaneously (Neuman 2003). Generally, researchers that adopt the survey research method do so because of their desire: (a) to group their research participants' responses into categories of similar patterns or analytical units, and (b) evaluate the cause and effect of these developed patterns or analytical units (Creswell 2008a; Graziano and Raulin 2007). The major difference between experimental research methods and survey research methods is that researchers using survey research methods do not purposefully manipulate or control research participants but rather encourage research participants to freely express themselves (Neuman 2003). The study research method was adopted in the early part of the exploratory phase of this research.

3.3.3 Case Study

The case study research method was adopted for the later part of this research (and the basis for this will be explained later in this chapter). Creswell (2008a) described case study research method as a strategy of inquiry in which the researcher explores in depth a program, event, activity, process or one or more individuals. Yin (2009) defined the case study as an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries and context are not clearly evident. Thus, case study research has improved functionalities over than other research methods (Eisenhardt 1989a). Based on this, the case study research method was used for this research because it enabled the researcher to: (a) acquire data from multiple sources; and (b) seek to develop detailed description of considered cases, as well as provide an in-depth understanding of the research interests in studied case organisations (Creswell 2008b).

Table 6: A schematic comparison of case study, experiment and survey (Creswell 2008a)

Experiment	Case study	Survey
Investigation of a relatively small number of cases	Investigation of a relatively small number of cases	Investigation of a relatively large number of cases
Information gathered and analysed about a small number of features of each case	Information gathered and analysed about a large number of features of each case	Information gathered and analysed about a small number of features of each case.
Study of cases created in such a way as to control the important variables	Study of naturally occurring cases; or, in 'action research' form, study of cases created by the actions of the researcher but where the primary concern is not controlling variables to measure their effects	Study of a sample of naturally occurring cases; selected in such a way as to maximise the sample's representativeness in relation to some larger population.
Quantification of data is a priority	Quantification of data is not a priority. Indeed, qualitative data may be treated as superior	Quantification of data is a priority
The aim is either theoretical inference (-the development and testing of theory) or the practical evaluation of an intervention	The main concern may be with understanding the case studied in itself, with no interest in theoretical inference or empirical generalisation. However, there may also be attempts at one or the other, or both, of these. Alternatively, the wider relevance of the findings may be conceptualised in terms of the provision of vicarious experience, as a basis for 'naturalistic generalisation' or 'transfereability'.	The aim is empirical generalisation, from a sample to a finite population, though this is sometimes seen as a platform for theoretical inference.

3.4 Research paradigms

Literally, paradigms “typically buttress commonly acknowledged views of individuals or groups of individuals” (Holden and Lynch 2004); which would in turn establish their diverse standpoints in relation to their framed orientations, faith and convictions (Holden and Lynch 2004). That is to say that on an individual level, paradigm helps us to understand the world. In other words, all paradigms are human constructions

(Guba and Lincoln 1994). As such, paradigms are noted as a knowledge claim (Creswell 2008a) or a basic belief system (Guba and Lincoln 1994) that guides and perfects researchers' actions in deciding on what he/she intends to research, why he/she chooses to do the research, and ultimately how he/she will do the research (Holden and Lynch 2004; Remenyi et al. 1998). This supports Kuhn's definition that (scientific) paradigm is a "theoretical framework, or a way of perceiving and understanding the world, that a group of scientists has adopted as their worldview" (restated in Hathaway 1995, pg 541).

This means that paradigms are widely-accepted, underlying philosophies used for validating, altering and understanding traditional and newly-developed fundamental propositions or opinions. There are two main predictable philosophical standpoints that researchers adopt when conducting their research; namely: the positivist and social constructionist perspectives (Remenyi et al. 1998; Tashakkori and Teddlie 1998). In a positivist world, objects of study are imagined to be objective and are of tangible reality (Remenyi et al. 1998). According to the Auguste Comte's (1853) assertion, all good intellects have repeated over and over again that there can be no real knowledge except that which is based on observable facts. Hence, positivism is more or less reviewed similarly or interchangeably on the same plane as quantitative paradigms.

In terms of cause-effect analysis, positivists assume that the observed effects are often triggered by independent causes, and that these cause-effect relationships can be conceptualised and understood more clearly with the use of statistical tools and/or methods (Easterby-Smith et al. 2002; Remenyi et al. 1998). Thereby, a positivist approach entails the manipulation of theoretical propositions using the rules of hypothetico-deductive reasoning (Holden and Lynch 2004; Lee 1991). As per social constructionist mindsets (which is sometimes tagged as subjectivist perspective or interpretive perspective), all agreed-upon viewpoints run in contrary to positivisms. For example, it is cited that it is considerably impossible for researchers not to be subjective, less involved and so on. See Table 7 below for more expatiated comparisons.

Table 7: Guide to choosing the right methodology (Holden and Lynch 2004)

	Positivist Perspective	Subjectivist Perspective	
Independence	The observer is independent of what is being observed	The observer interacts with subject being observed	Interaction
Value-freedom	The choice of what to study, and how to study it, can be determined by objective criteria rather than human beliefs and interests	Inherent biasness in the choice of what to study and how to study it as researchers are driven by their own interests, beliefs, skills, and values	Value-laden
Causality	The aim of social science should be to identify casual explanations and fundamental laws that explain regularities in human social behavior	The aim of social science is to try to understand what is happening.	No cause and effect
Hypothetico-deductive	Science proceeds through a process of hypothesising fundamental laws and then deducing what kinds of observations will demonstrate the truth or falsify of these hypotheses.	Develop ideas through induction from evidence; mutual simultaneous shaping of factors	No hypothetico-deductive reasoning
Operationalisation	Concepts need to be operationalised in a way which enables facts to be measured quantitatively; static design - categories isolated before study	Problems as a whole are better understood if the totality of the situation is looked at	Operationalisation
Reductionism	Problems as a whole are better understood if they are reduced into the simplest possible elements.	Problems as a whole are better understood if the totality of the situation is looked at.	No Reductionism
Generalisation	In order to be able to generalise about regularities in human and social behaviour it is necessary to select samples of sufficient size; aim of generalisations is to lead to prediction, explanation and understanding	Everything is contextual; patterns identified - theories then developed for understanding.	Generalisation
Research Language	Formal, based on set definitions; impersonal voice; use of accepted quantitative words	Informal, evolving decisions; personal voice; use of accepted qualitative voice.	Research Language

Similarly, Table 8 highlights previous work targeted at explaining the distinctiveness of positivism and social constructionism (or subjectivism), and how these considerations can aid in choosing the proper research methodologies. This is also similar to the connotations of positivism and social constructionism put forward by Easterby-Smith et al. (2002), see Table 9. According to Holden and Lynch (2004),

these types of tables can be used to show key research implications and perspectives for choosing the right research methodologies. Using these sets of arguments, Tashakkori and Teddlie (2003) went on further to classify how typical research methods that fit suitably along the positivism and social constructivism planes. See Figure 13.

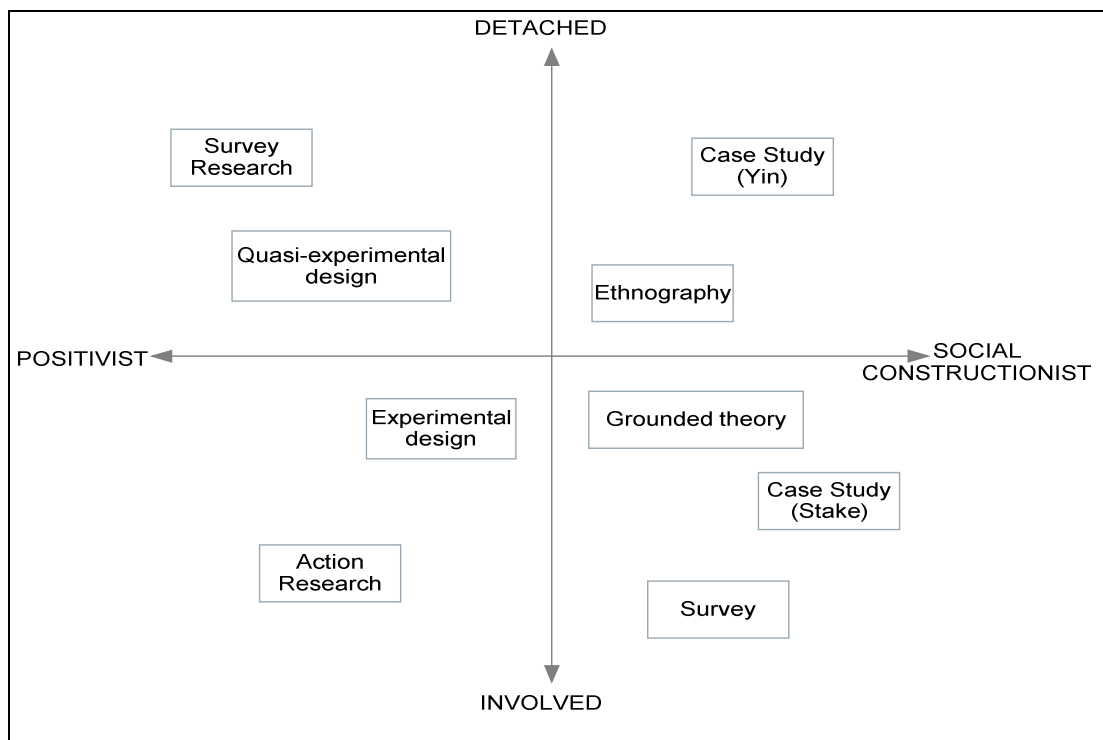
Table 8: Key research implications for choosing the right methodology (Tashakkori and Teddlie 1998)

Axiom	Positivism	Social constructionism
Ontology: assumptions about the nature of reality	There is a single reality	There are multiple constructed realities
Epistemology: relationship between the knower and to be known	Independent	Knower and known are inseparable
Axiology: role of value in inquiry	Inquiry is value free	Inquiry is value-bound
Generalisations	Time and context free generalisations are possible	Time and context free generalisations are not possible
Causal linkages	There are real causes that temporally precedent to or simultaneous with effects	It is impossible to distinguish causes from effects
Research logic: Inductive or deductive	Deductive: Emphasis on arguing from general to particular	Inductive: emphasis on arguing from particular to general

Table 9: Comparison between positivism and social constructionsim (Easterby-Smith et al. 2002)

Features	Positivism	Social Constructionsim
The observer	Must be independent	Is part of what is being observed
Human interests	Should be irrelevant	Are the main drivers of science
Explanations	Must demonstrate causality	Aim to increase general understanding of the situation
Research progress through	Hypothesis and deductions	Gathering rich data from which ideas are induced
Concepts	Need to be operationalised so that they can be measured	Should incorporate stakeholder perspectives
Units of analysis	Should be reduced to simplest terms	May include the complexity of whole situations
Generalisation through	Statistical probability	Theoretical abstraction
Sampling requires	Large numbers selected randomly	Small numbers of cases chosen for specific reasons

Figure 13: Matrix of research designs (Easterby-Smith et al. 2002)



3.5 Research strategy adopted

So far, the various philosophical views alongside research assumptions, designs and process criteria, which will most definitely influence how a researcher does his/her investigations, have been explained. The next stage is to highlight the type of research strategy adopted for this study. This depends on the extent on the purpose that the study seeks to fulfil at every phase of the research. For example, according to Gomm et al. (2000) for illustrative research, the researcher would either implicitly or explicitly present his/her evidence in terms of a particular framework. Whereas, supposing the research problem is about developing theoretical ideas, the study would more likely than not be more detailed and open-ended in character. As such, this research based on the type of data collected and the research questions put forward are subdivided into three main research phases, namely: (a) the exploratory research phase, (b) the descriptive research phase and (c) the explanatory and/or correlational research phase (Bless et al. 2000; Forza 2002; Meredith 1998)). These three phases are explained in Table 10.

3.6.1 The exploratory research phase

Exploratory research is commonly adopted in research instances in which the researchers know very little about what they intend to investigate (Bless et al. 2000). Exploratory research can also be used to investigate areas of interest that no one has yet examined (Neuman 2003). This means that researchers that choose to carry out exploratory studies are mandated to develop preliminary conceptions of the study's areas of interest anew or afresh (Neuman 2003). In summary, exploratory research is primarily used in investigations that focus on "what" questions (Neuman 2003; Yin 2009). In line with this, Yin (2009) advised researchers to first of all consider the purpose of their studies before choosing their research approach and/or methods. In addition, researchers that choose to conduct exploratory research must be open-minded, flexible and creative (Neuman 2003).

According to Forza (2002), exploratory research is pre-eminently used: (a) to establish associating factors and concepts of investigated constructs in relation to the phenomenon of interest, (b) to determine how best to measure them, and (c) to

discover deeper insights and new facets of the phenomenon under study. In other words, exploratory research is used to create general mental illustrations or conditions relating to what is being observed (Neuman 2003). More often than not, the main researchers' goal is to develop logical and unifying themes that would be used for further inquiry in later stages of the research (Yin 2009). Otherwise put, exploratory studies typically involve the unearthing of preliminary evidence that will then be used to validate research hypotheses (Forza 2002). Hence, exploratory research is used for generating information on problems either in relatively new fields or cases where the researcher has limited prior knowledge.

Therefore, an exploratory research approach was adopted for the early part of this research. This was because little is known of a rational approach to integrating knowledge management practices into building organisational resilience in Nigerian organisations, especially after organisation-wide changes. And so, the first task was to conduct an exploratory study that served as a means to: (a) give practical illustrations of a representative range of common transformational change initiatives being implemented by organisations in Nigeria; (b) examine the different approaches of Nigerian organisations in response to maintaining long-term performance and success of organisational change benefits and (c) identify critical factors that would subsequently be incorporated in the development of training strategies that will aid organisations in becoming resilient. In summary, the first research phase centred on identifying attributable factors that either promote or hinder organisations' ability to maintain long-term performance, especially after major organisational changes. This research phase is commonly referred to as the theme development or act nomination phase (Buss and Craik 1985; Szamosi and Duxbury 2002).

3.6.2 The descriptive research phase

A descriptive research process is useful for further arguing the similarities, basis, thoroughness and accuracy of features of things in question (Howitt and Cramer 2011). Descriptive research seldom focuses on how and who questions (Neuman 2003). As such, descriptive research delineates areas of interest as they currently exist (Easterby-Smith et al. 2002). In addition, it is commonly used when the researcher seeks to give a detailed account and illustration of a phenomenon

(Neuman 2003). As such, descriptive research is usually a follow-up to exploratory research. In this way, descriptive research can be used to present in-depth evident characteristics (e.g. frequencies, averages, standard deviation and so on) of identified unifying themes established in the earlier conducted exploratory study (Walliman and Baiche 2005). In summary, a descriptive study presents specific details of a situation, item, variable or relationship (Neuman 2003). Therefore, a descriptive approach was used to describe each of the constructs of the research themes studied, so as to better understand the frequency of participants' responses.

3.6.3 The final research phase

The last part was more quantitative-based. The researchers' aim was to draw further support on whether examined organisations' employees' agree or disagree with the exploratory research findings. This was also used to test the adequacy of the concepts developed, in relation to the specific aim of testing of hypothesised linkages among the concepts, and of the validity boundary of models (Forza 2002).

3.6.3.1 The explanatory research phase

An explanatory research approach is usually adopted when researchers offer to increase understanding, as well as to elaborate and make clear the causal relationships, of identified factors in relation to aspects of phenomenon under consideration (Neuman 2003). So, explanatory research focuses on why questions (Neuman 2003). Bless et al. (2000, page 43) submitted that an exploratory research approach should be used when the research questions demands that the researcher explains the relationship between variables and demonstrates that a change in one variable causes change in another variable. This depicts an instance whereby researchers provide reasons as to "how" and "why" certain observable behaviours or phenomena occur, changes or varies as they have been noticed to do under different circumstances.

In line with Neuman's (2003) analysis, explanatory research would normally be done after an exploratory and a descriptive research. Therefore, in this research also, explanatory research was carried out after both the exploratory and descriptive

researches were done. The explanatory research approach was used to explain the causal relationships between the research variables. In view of this, each of the case studies was designed as an explanatory study. Explanatory studies simply describe in-detail derived concepts, propositions and factors, and as such the case study approach served as an avenue for testing early research findings (McCutcheon and Meredith 1993; Voss et al. 2002). According to Yin (2008), the explanatory cases are used to highlight what was explored in the pilot study, the purpose of this exploration, and the criteria for which the exploration could be considered successful.

3.6.3.2 The correlational research phase

In correlational studies, researchers examine the extent to which assessed variables at some point in time during the research is associated with one another (Howitt and Cramer 2011). It aids researchers' understanding of the relationships between variables (Bless et al. 2000). As such, explanations of correlational research are usually hinged on the basis of cause-and-effect relationships as it is assumed that (a) any of the observed variables might possibly explain why aspects of the areas under consideration happen, and (b) most likely the researchers areas of interest would have different causes rather than a single cause (Howitt and Cramer 2011). In summary, correlational research provides researchers the avenue to approximate the validity of the relationships between variables, while at the same time being able to evaluate the effects of other variables on this relationship (Bless et al. 2000). That is, the mediating effects of control variables in relation to examined relationships between variables can be established. Hence, correlational effects among the research themes developed during the pilot study were assessed.

Table 10: Research strategy adopted

Phase	Tasks	An overview of what the tasks entail	Philosophical views taken	Research method(s) adopted
1st phase (Exploratory research)	Literature review	<ul style="list-style-type: none"> ■ Literature review on organisational changes (common business change initiatives, their failures, and reasons for their failures), knowledge management and organisational resilience. ■ Describe Nigeria's past and current economic policies and developmental plans ■ Explain how organisations, operating in Nigeria strive to maintain long-term performance. ■ List the challenges and opportunities that Nigeria, as a country, stands to gain. ■ Identify research gaps and further justify the need for the research 	<ul style="list-style-type: none"> ■ Positivist perspective (the researcher tried to be independent of what is observed). ■ Subjectivist perspective (problems as a whole are better understood if the totality of the situation is looked at; literature is reviewed so as to enable the researcher justify the research problem; the aim for this task is also to understand what is happening) 	Archival analysis; History, literatures
	Pilot Study	<ul style="list-style-type: none"> ■ Select sampling method ■ Choose data collection method and conduct a pilot study ■ Code, categorise and analyse preliminary data ■ Identify and develop emerging patterns ■ Use thematic networking to develop the research themes ■ Develop a data collection tool for 2nd phase of the research 	<ul style="list-style-type: none"> ■ Positivist perspective (the researcher tried to be independent of what is observed). ■ Subjectivist perspective (Everything is contextual; patterns, and themes were developed through inductive analysis of the preliminary data and emerging patterns were marked) 	Focus groups; Interviews
2nd phase (Descriptive research)	Description, and understanding of the research's themes	<ul style="list-style-type: none"> ■ Select sampling method and case study organisations ■ Conduct interviews and administer questionnaires ■ Present interviews' and questionnaires' results ■ Do a wide-ranging descriptive analysis (using SPSS). ■ Do a structural equation modelling with AMOS 	<ul style="list-style-type: none"> ■ Subjectivist perspective (small sample investigated in-depth; the aim is to try to understand what is happening) 	Case study; Survey research (use of questionnaires)
3rd phase (Explanatory and correlational research)	Discussion of research results and model development	<ul style="list-style-type: none"> ■ Explore inter-relationships among research themes and research constructs ■ Examine relationships development among research themes ■ Produce preliminary research models ■ Produce final research models 	<ul style="list-style-type: none"> ■ Positivist perspective (the aim is to identify and develop causal inferences and relationships; concepts operationalised in a way that enables facts to be measured quantitatively; hypothesising and deducing observations to demonstrate the truthfulness or otherwise of research hypotheses) 	Statistical analysis; Cross-case analysis
	Conclusions and recommendations	<ul style="list-style-type: none"> ■ Identify contributions to body of knowledge ■ Highlight research limitations ■ List recommendations 	<ul style="list-style-type: none"> ■ Subjectivist perspective (informal, evolving decisions; personal voice; use of accepted qualitative words) 	Grounded theory; flexible and emerging;

3.6 Explaining this research's design and process

3.7.1 The Need for a Pilot Study

In studies such as this one that offer direct assessment of the relevance and applicability of procedures, models or hypotheses developed in more advanced economies to the Nigeria economic and social system, both the (Nigerian) national and corporate culture are more often than not considered a drawback (as seen also from the accounts of the following: Edoho 2001; Ejiofor 1987; Iguisi 1995; Jaja and Zeb-Obipi 1999; Nwokah and Ahiauzu 2008; Ogundele 2006; Timmer 2007 pg 218). This explains the crux of the problems of sustaining attained successes (Okafor 2008a; Prince-Abbi 2002) during and after change or policy implementations in Nigeria (Makinde 2005). In fact, this reinforces Inyang's (2009) belief that the intra-cultural differences in Nigeria are the main reasons for the difficulties experienced in establishing generalised, but acceptable management practices across Nigerian industries. To get a more comprehensive grasp of how national cultures affect organisational performance in Nigeria, – read Prince-Abbi (2002); Okafor (2008a); Makinde (2005); Kotter and Haskett (1992).

On the importance of acknowledging culture in international research processes and dimensions, David Stephens (2009) advised that researchers deciding on carrying out exploratory studies had to be broad-minded in generating hypotheses or theories from the data that emerged as the research evolved, instead of being more inclined to testing pre-tested and generalised hypotheses. In other words, the researcher should strive to remain objective when choosing an appropriate research methodology irrespective of whether the research is seeking to explore new, or confirm existing knowledge (Forza 2002). Ajzen (1991) also counselled researchers that to-be-tested sets of research beliefs, especially behaviour-specific factors, should at least be developed anew from the research sample and not intuitively generated entirely based on the researchers' previous exposure and extensive involvement. As such, the processes of such research ought to entail some inductive analyses if a larger part of the research findings would emerge based on the researchers interpretation of the frequent, dominant or significant themes inherent in the raw data acquired (Thomas 2006). This inductive cognitive process is what

Greenfield (2002), Perry (1998) and many others refer to as theory building. As a whole, since this research partly seeks to build theory on why organisations in Nigeria might be finding it hard to sustain long-term performance, a pilot study was conducted so as to unearth critical factors that will help organisations to successfully implement organisation-wide changes with special interest placed on how they can also improve their resilience.

3.7.1.1 Selecting the pilot study participants

The process of selecting research participants or cases is a very important aspect of any study (Creswell and Clark 2006). In practice, researchers adopt one or a combination of sampling strategies that they consider appropriate for their studies (Tashakkori and Teddlie 1998). According to Creswell (2008a), Patton (2002), and Arcury and Quandt (1998), most researchers usually select their research sampling population(s) by using either the random probability or the purposive sampling methods. In random sampling, researchers often seek to confirm existing themes, patterns or theories by looking at “outlier cases to see whether these patterns are consistent and founded” (Miles and Huberman 1994).

In such instances, the researcher constantly bases his/her findings in relation to it being a representative of the larger population without really delving into comprehensive and exhaustive descriptions of what the study focuses upon (Neuman 2003). In other words, random sampling is used at times when a researcher considers it unnecessary to process in-depth an entire dataset, but only to support statistical analysis of a dataset (Olken and Rotem 1986). Thereby, researchers that adopt random sampling usually do so in search of general information in situations that they have little or no preference for their research participants (Easterby-Smith et al. 2002).

Whereas researchers that go for the purposive sampling method do so mostly because they probably need unrestricted access to the type of information that they desire and as such perceive that with their choices they would have more fitting answers to their enquiries (Creswell 2008a; Patton 2002). Such researchers commonly think the type of information they seek can best be obtained from their

choice samples, or case study organisations as the case may be. This is consistent with Creswell and Clark (2006) who offered that researchers on the whole normally base their sampling preferences on the assumption that their eventual choices are probably the closest options if not the best that can offer them the level of access to the type of information they seek.

Though it might be argued that purposive sampling results would not represent the variation in a population and should rather be used to generate research questions than answering them (Arcury and Quandt 1998), three reasons make the random sampling method less favourable than the purposive sampling method in qualitative research. These are:

- Firstly, for the fact that the consideration of time is a crucial factor in research, qualitative research sampling tends to be purposive rather than random (Miles and Huberman 1994, pg 27) basically because it explores real life on-going issues (Yin 2009) and researchers have the option to select those they deem knowledgeable or representative of what they are investigating (Creswell and Clark 2006). More so, with random sampling, the logic and coherence of social processes or phenomena is often misplaced or totally missed (Miles and Huberman 1994).
- Secondly, it is a general belief amongst qualitative researchers that such research should be more analytical and explanatory by providing an in-depth analysis and summary of an ongoing phenomenon (Creswell 2007; Miles and Huberman 1994; Shah and Corley 2006; Zaharia Rodica Milena 2008) rather than trying to predict or generalise research findings for a larger population from of a sample of the population (Firestone 1993).
- Lastly, since “it is impossible to cover everything” (Yin 2009, pg 29) pertaining to one’s research concerns or “study everyone everywhere doing everything”... and considering that “deciding where to look is not easy “(Miles and Huberman 1994)”, it is more appropriate for researchers to set research boundaries and at the same time create a frame within which they want to embark on their investigations (Miles and Huberman 1994). That is, choose research samples based on a defined set of criteria (Patton 2002). This preferred process of

selecting sample types based on criteria is more or less an outgrowth of the purposive sampling method.

Because of these reasons, for this research, the pilot study participants organisations were chosen using (selective) purposive sampling method (as also done by Ilori et al. 2002; Okpara 2009 in their studies on aspects of Nigeria). The reason for this stemmed from the researchers' desire to accommodate as many individuals as possible. This was because, as it has been explained above, that the purposive sampling method enables researchers to choose participants they perceive will best understand the research problems and provide insightful answers (Creswell 2008a). So at the start of the explanatory phase of this study, using the funnelling sequence (Erickson 1986; Miles and Huberman 1994), the preferred sample size was deliberately expanded to the highest possible number of organisations, based on the assumption that not all invited participants would participate (seen in Fraenkel and Wallen 2006; Okpara 2009) and also, to make provision for flexibility, reliability and validity during data collection given that some data may be lost in the eventual conduct and analysis of the study.

At the start of the pilot study research, the criteria and scope for selecting participants were initially made broad. So, the size of team and/or organisation that preferred individuals oversee as well as the industry in which they have or have had experience in were discounted (this was also done by Mustapha et al. 2009; Okafor 2008b). Those marked as desired respondents for this study were various individuals that have, in times past, served in executive or managerial positions for at least four years in organisations considered successful, across the Nigerian industries. This is because senior managerial perspectives on organisational issues are often mulled over as being authoritative (He and Baruch 2009). Secondly, "it is a fact that the higher people are in the organisation, the more they see and understand some of the boardroom problems" (Gilgeous 1997). Lastly, senior managers are found to be less reluctant to discuss on a lot of issues that pertain to their organisations (Creswell 2007). In relation and with specifics to this study, successful organisations were considered and evaluated as result-driven organisations (Schaffer and Thomson

1992) in that they have fundamentally sound competitive positions and revenue profiles.

These types of organisations are alternatively referred to as high-performing organisations, in extant literature (Katzenbach and Smith 2003; Schroeder and Flynn 2001). In addition to this, one thing that is significantly evident in these organisations is the adoption and/or use of innovative high-performing work system practices and paradigms (Combs et al. 2006; Flynn et al. 1995; Godard 2005). High-performance work practices are simply a category of initiatives deployed with the intention of empowering and motivating employees to build up, share and apply their competence (i.e. skills and knowledge) more fully than conventional practices (Godard 2005; Katzenbach and Smith 2003) towards improving and maintaining long-term organisational performance (Koh et al. 2007). A few examples of such paradigms include: lean methodology, total quality management, customer relationship management, enterprise resource planning systems and so on. Thus, in order to have the most-suitable participants, individuals that the researcher deemed appropriate and perceived as having sufficient first-hand knowledge of situations/current practices in the areas of interest were approached and asked to participate in an interview session. It should however be noted that the eventual participants were interviewed separately, at their own convenience and time. In total, twenty-one such persons were interviewed. A profile of the pilot study participants is presented in Table 11.

Table 11: Profile of Pilot Study Participants

Code name	Number of years that respondent has worked in an exec./ managerial position	Present Position	Organization Type
Int.1	7	Financial controller	National
Int.2	6	Technical manager	Multinational
Int.3	8	Project manager	Multinational
Int.4	4	Performance manager	Multinational
Int.5	7	Deputy vice chancellor	National
Int.6	5	Managing partner	Local
Int.7	4	Customer relationship manager	Local
Int.8	11	Director, services	National
Int.9	5	Compliant manager	Multinational
Int.10	9	Managing partner	Local
Int.11	26	Managing Director	Local
Int.12	20	Chief Executive Officer	Local
Int.13	17	Director General	National
Int.14	26	Managing partner (to int.11)	Local
Int.15	13	Director, production	National
Int.16	5	Medical consultant	National
Int.17	24	Production Director	Local
Int.18	7	Managing partner	Local
Int.19	6	Business Development manager	Multinational
Int.20	11	Geo-market manager	Multinational
Int.21	8	Chief executive officer	Local
Multinational - companies that have one or more subsidiaries in other countries other than Nigeria			
National - companies that have offices in three or more states in Nigeria (or has a staff force > 250).			
Local - companies that have just one office in one or two states in Nigeria; and can typically be regarded as a small-medium enterprise with its staff force > 250)			

3.7.1.2 Choosing the data collection method for the pilot study

The researcher used the survey research method for the pilot study. The survey research method comes in various forms; the most commonly described ones include face-to-face interviews, phone interviews, internet opinion polls and questionnaires (Creswell 2008a; Neuman 2003). However, (face-to-face) interview sessions were chosen over the use of other methods, because with interviewing the researcher can have: (a) a good presentational range of people, (b) an in-depth access to insightful information and understanding of each individual, organisation and of every topic talked about and most importantly (c) less respondents' responses are lost (Gillham 2000; Kvale 1996). In the pilot study, the researcher sought answers to unstructured, open-ended, questions (Creswell 2008a; Yin R 1994) during arranged "elite interview sessions" (Gillham 2000a; Gillham 2000). One primary challenge the researcher guided against during the interviewing process was to avoid asking loaded or direct questions (Neuman 2003). In other words, the researcher ensured that all interviewees truly expressed their own meanings and subjective understandings on research issues raised in the course of the interview (as advised by Perry 1998).

3.7.1.3 Developing the pilot study questions

Open-ended questions were used instead of closed ended questions. The set of open ended questions the researcher asked pilot study respondents can be found in Appendix I. Open-ended questions were used because they are unstructured, loosely framed; thus enabling respondents to respond freely as they deem fit (Creswell 2008a; Neuman 2003). In addition, one of the greatest advantages for using open-ended response formats is that it is faster and easier to use in large-scale surveys (Neuman 2003). It is taken that open unstructured questions help to create an opportunity to probe further on intended questions (see benefits of open-ended questions presented by Oppenheim 2001). Whereas, in closed ended questions' format, respondents are presented with sets of responses for each of the questions (Neuman 2003). See the advantages and disadvantages of both open-ended and closed questions, as presented by Neuman (2003), in Table 12.

Table 12: Advantages and disadvantages of open and closed-ended questions (Neuman 2003)

Types of questions	Advantages	Disadvantages
Closed-ended questions	<ul style="list-style-type: none"> ■ They are easier and quicker for respondents to answer ■ The answers of different respondents are easier to compare ■ Answers are easier to code and statistically analyse ■ The response choices can clarify a question's meaning for respondents ■ Respondents are more likely to answer about sensitive topics ■ There are fewer irrelevant or confused answers to questions ■ Less articulate or less literate respondents are not at a disadvantage ■ Replication is easier 	<ul style="list-style-type: none"> ■ They can suggest ideas that the respondents would not otherwise have ■ Respondents with no opinion or no knowledge can answer anyway ■ Respondents can be frustrated because their desired answer is not a choice ■ It is confusing if many (e.g., 20) response choices are offered ■ Misinterpretation of a question can go unnoticed ■ Distinctions between respondent answers may be blurred ■ Clerical mistakes or marking the wrong response is possible ■ They force respondents to give simplistic responses to complex issues ■ They force respondents to make choices they would not want to make in the real world
Open-ended questions	<ul style="list-style-type: none"> ■ They permit an unlimited number of possible answers ■ Respondents can answer in detail and can qualify and clarify responses ■ They can help us discover unanticipated findings ■ They permit adequate answers to complex issues ■ They permit creativity, self-expression and richness of detail ■ They reveal a respondent's logic, thinking process and frame of reference 	<ul style="list-style-type: none"> ■ Different respondents give different degrees of detail in answers ■ Responses may be irrelevant or buried in useless detail ■ Comparisons and statistical analysis become very difficult ■ Coding responses is difficult ■ Articulate and highly literate respondents have an advantage ■ Questions may be too general for respondents to lose direction ■ Responses are written in verbatim, which is different for interviewers ■ An increased amount of respondent time, thought and effort is necessary. ■ Respondents can be intimidated by questions ■ Answers take up a lot of space in the questionnaire

3.7.1.4 Ethical considerations observed during the pilot study

These are general interests, dilemmas and conflicts that play up over the proper way as to how researchers ought to conduct their research. Literarily, ethics refer to governing principles of right and wrong, and mainly focus on morality and acceptable conducts. They serve as regulatory guides and/or codes of conduct binding a set of professionals. Hence, the process of properly outlining ethical considerations in research is believed to be quite important (Creswell 2008a). Concerning this, there are common ethical issues that researchers undertaking qualitative research should be aware of, and also make efforts to apply during interviewing sessions (Punch 2005). Ethical issues and considerations should be anticipated in the areas of (a) identifying problems, purposes and questions, (b) data collection, (c) data analysis and interpretation, and (d) writing and reporting the research results (Creswell 2008a)

According to Creswell (2008a), apart from using ethical considerations to argue that the study participants were accorded necessary respect and their rights were duly observed, ethical considerations allow researchers to: (a) protect their research participants, (b) develop a level of trust with their research participants, (c) promote the integrity of their research, (d) guard against misconduct and impropriety that might compromise their studies and (e) cope with uncertainties and challenging problems. In general, these ethical issues and considerations include: respecting the right of respondents, ensuring confidentiality of all issues discussed, unbiased reporting of the interview sessions and non-abuse of temporary privileges granted to the researchers (Creswell 2008a; Fraenkel and Wallen 2006). On that account, the researcher ensured that none of the above-mentioned ethical issues and considerations raised and noted was breached during the pilot study.

3.7.1.5 The pilot study interviewing process

This sample size of the pilot study was considered good enough to draw, generalise and establish common themes since MacCracken (1997) recommended that a minimum of eight long interviews like the ones used in this pilot study is perfectly

sufficient to do such. Each interview was digitally recorded, coded and transcribed in verbatim (Creswell 2008a; Fink 2003; Silvey 1975; Strauss and Corbin 1990). The interviews were designed to be free-flowing, as prescribed by Saunders et al. (2003) and lasted no more than an hour and thirty minutes each. The outline of each interview conducted at the pilot study phase, adapted from Babbie et al. (1973) and Bourque and Fielder (2003) generally followed this pattern:

- a. At the start of the interview: The researcher introduced himself and explained the objectives for the investigation. Thereafter, the researcher guaranteed the interviewee that all discussions and opinions expressed will be held anonymously. This implies that the interviewees' data (which indirectly or directly include any leading facts) that might in any way suggest or contribute to them being traced and identified will be blocked out in any publications relating to the research when reported and/or analysed. After the respondent agreed and signalled to the researcher to continue with the interview, the researcher then sought permission to digitally record the interviewing process. Information relating to personal data (e.g. number of years of managerial experience, number of employees and present managerial position) were among the first data gathered. Sensing that the respondent was now at ease and comfortable, the researcher started the consultation.
- b. During the course of the interview: Considering the fact that the interviewee is highly knowledgeable and in all the cases more experienced than the researcher, they were purposely made to feel in-charge of the whole process. Because of this, the researcher allowed the interviewee to carry-on while expressing his/her opinions on issues even if the comments appeared off-mark and irrelevant to the aims of the interview. In generality, this interview format afforded the researcher the opportunity to uncover and deliberate more on unanticipated areas of concerns. It is also noteworthy to mention that as such unanticipated areas of concerns evolved, they were included as part of the questions to ask in subsequent interviews. For those that had already done the interview, the researcher had to make follow-up calls to them.
- c. In conclusion: Towards the end of each interview, the researcher intimated interviewees of the next phase of the research and extended an invitation to have

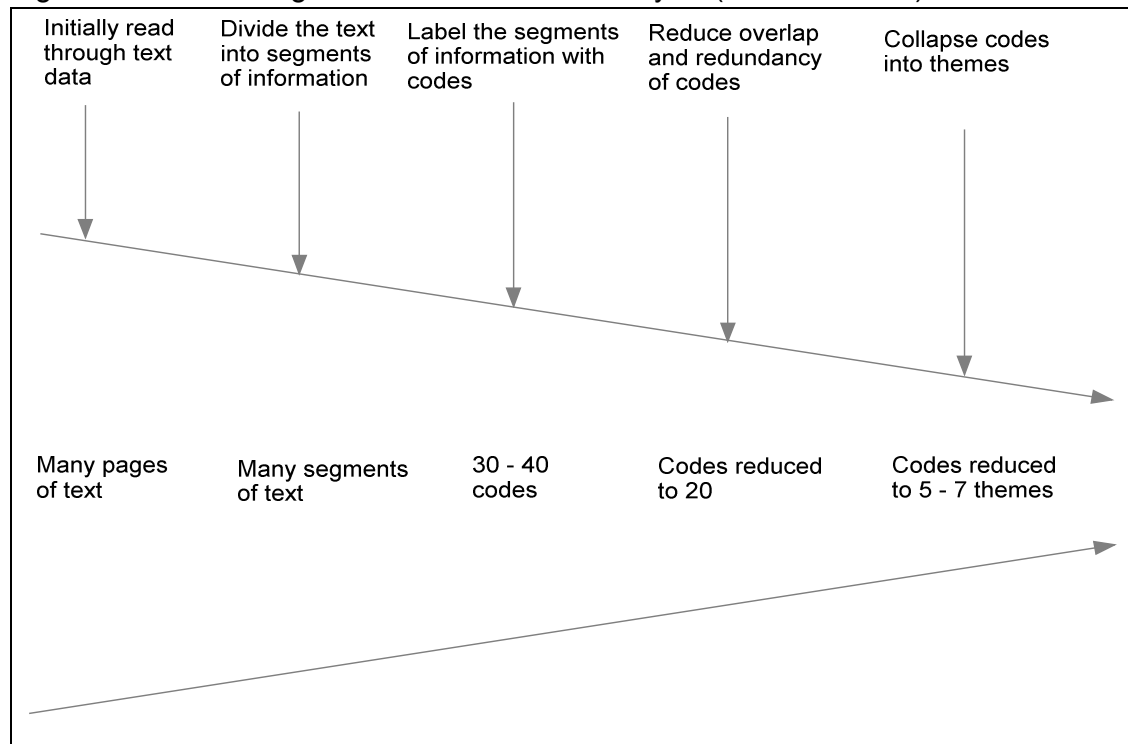
their organisations as one of the case studies. The introductory pack sent to prospective organisations can be found in Appendix II. The respondents were then assured that the final report of the research study would be made available to them. In cases where there was still some time, the researcher asked for feedback and comments on how the interview process was conducted.

3.7.1.6 Analysing the pilot study data

The pilot study was entirely an inductive research; thus the data were mainly analysed qualitatively. Qualitative-inclined analysis is essentially inclined on researchers' attempt to try and seek for better understandings and meanings' to respondents' beliefs and responses (Creswell 2007) by involving and immersing themselves in all the details and processes of the research, so as to gain firsthand knowledge of the situation (Agar 1980; Patton 2002; Singleton et al. 1988; Stenbacka 2001). Expectedly, there are available guides on how to conduct qualitative analysis of data; for example Miles and Huberman (1994), Marshall and Rossman (2006), Creswell (2008a) and Tesch (1990). Creswell (2008a) also suggested a multiple-step approach for conducting qualitative data analysis. These steps (i.e. those proposed by Creswell 2008a) were adopted as guidelines for this research study.

Just as Creswell (2008a) advised, the researcher transcribed the (interview) data. After the data had been transcribed, the researcher read the transcribed scripts over and over again so as to gain a general sense of the information collected and to reflect on its overall meaning. The next task that the researcher performed was to prepare and organise the transcribed scripts in preparatory for analysis by "selecting, focusing, simplifying, abstracting and transforming the data that appears in written-up field notes or transcriptions" (Miles and Huberman 1994). As such, the researcher sorted the transcribed texts, or data, into smaller number of "analytic units" (Miles and Huberman 1994) or codes (Creswell 2007). This qualitative analytic process is referred to as the coding process (Creswell 2007) or pattern coding (Miles and Huberman 1994). A diagrammatic representation of the coding process is presented in Figure 14.

Figure 14: The Coding Process in Inductive Analysis (Creswell 2007)



In adherence to the steps involved in carrying out the coding process, the researcher sorted the (interview) data into different loosely related categories. This enabled the researcher to make sense or meaning of all the information that the transcripts might contain (Creswell 2007; Miles and Huberman 1994). The codes were reduced to five, and thus adopted as the research's central themes. In order to ascertain that the five research themes were indeed true representations of the pilot study's respondents' concerns, the researcher's adopted coding process steps were compared with a similar qualitative analysis technique called thematic networking (Attride-Stirling 2001a). The thematic networking analytic process is quite similar to the coding process. It also involves the classification of the analytic units into categories or segments based on similarities or even at times based on differences noted in transcribed data (Attride-Stirling 2001a). The results of the comparisons between the emergent themes developed through either of these two processes (i.e. coding process and thematic networking) were the same. See Appendix III for a full process

of how the emergent themes were developed in this study in adherence to these recommendations.

3.7.2 The case study approach adopted

3.7.2.1 Deciding on the number of case organisations needed

Deciding on the number of cases to be used for a study has been discussed in extant literature. Most of the authors highlight how important this is (for example, Babbie 1973; Creswell 2008a; Patton 2002; Voss et al. 2002; Yin 2009). Though sample size is relevant, what is more important is for researchers to ensure that they collect extensive detail and/or information for each of the cases they consider (Creswell 2008a). Hence, the use of a single case study has been criticised. According to Yin (2009), an investigation in which the researcher’s subjects of interest can be analysed and described in greater depth by using more than one cases is better than an instance where it can only be assessed in a particular way that will yield less information. This is because multiple cases afford researchers the chance to validate their research while also helping to guard against bias on the part of the researcher (Voss et al. 2002) – see Table 13. As such, based on the differentiation made in the table, the use of multiple case studies was the preferred option for the second phase of this research.

Table 13: Benefits of choice and number of research cases (Voss et al. 2002)

Choice	Advantages	Disadvantages
Single	Greater depth	Limits on the generalisability of conclusions drawn. Biases such as misjudging the representatives of a single event and exaggerating easily available data
Multiple cases	Augment external validity, help guard against observer bias	More resource needed, less depth per case

3.7.2.2 Selecting the case study organisations

After the pilot study was conducted, the next challenge was to search out and engage organisations to participate in the study. The case study organisations were also purposely selected (Creswell 2008a; Patton 2002). The oil and non-oil sectors in Nigeria were taken as a relevant unit of analysis. In the non-oil sector, organisations were selected from different industries that collectively account for over 60 percent of Nigeria's GDP (CBN 2000; CBN 2007). The industries chosen were the manufacturing, petrochemical, health, automobile, business consulting, finance, legal and media-related industries. Two of these industries, that is the manufacturing and petrochemical industries, have been described as ailing industries (Adeyemi 2007). Once the target industries were identified, the next challenge was to invite organisations to participate in the study. A total of eighty nine organisations were initially invited to participate in the study; fifty six organisations neither replied nor acknowledged receipt of the researcher's invitation while the remaining thirty three organisations showed some interest to participate in the study. Out of the thirty three organisations that initially showed interest, seven of the organisations did not want to participate, but just wanted to have access to the study's results. The researcher accepted this condition. This was based on the projection that the seven organisations can, at the later stages of the research, be used to validate the developed training strategies developed in this study.

Despite expressing initial interest, eleven organisations were eventually not forthcoming; they neither responded to subsequent letters or phone calls nor did they grant full approval to the researcher to conduct the investigation in their organisations. Just about the time the researcher set out to conduct the research, one organisation indicated their desire not to make the research formal. The contact person is an operational manager who was interested but his functional manager was not favourably disposed to the research. This arrangement did not however work out; as such the organisation was not one of those that were eventually investigated. At the time the researcher carried out the research, only nine organisations granted full approval to the researcher and in the end participated in

the study (see Table 14). A brief overview of the case organisations can be found in Appendix IV.

3.7.2.3 Gaining access into case study organisations

Contact persons in the nine organisations that finally accepted to take part in the study were established. Through the contact persons, gatekeepers were identified. A brief proposal was submitted to the gatekeepers. Just as it was proposed in Creswell (2008a), the proposal laid out: (a) what the researcher wanted to address; (b) how the researcher intended to conduct the investigation; and (c) how the results were to be reported. Thereafter, the gatekeepers provided access by granting approval to the researcher to go ahead with the research in their organisations.

3.7.2.4 Administering the questionnaire in case organisations

Mutually agreeable days were arranged with the gatekeepers or the contact persons in each of the case studies for the interviewing of managerial staff and administering of the questionnaires to their non-managerial staffs. A copy of the questionnaire administered to the non managerial staff is presented in Appendix V. Also, a list of senior staff interviewed in each of the case organisations is presented in Appendix VI. Before the set day, a list of prospective respondents was created. Also, the researcher ensured that the employees' were properly briefed of the meeting place and also the allotted time in each of the case organisations. Two days before the accepted day, based on the researcher's request, a reminder email was sent to all the prospective respondents. In case organisations where not all the employees had an email account, prospective respondents were reminded by their line managers. On the arranged days in each of the case organisations, before the researcher administered the questionnaires, the researcher:

- i. Created a comfortable and trusting environment for respondents. As the respondents went in to fill the questionnaire, they were offered stencils to use and also some sweets as gestures. Throughout, emphasis was placed on the fact that respondents' responses were confidential.

- ii. Offered clarification to respondents that needed help. The researcher was at hand to rephrase or explain the intent of each of the questions asked to respondents (Kvale 1996).

In total, 425 questionnaires were distributed to the respondents across the nine case organisations, but only 304 respondents completed and returned their questionnaires. This represented approximately 72% of the total questionnaires distributed. Company A had the highest number of unreturned questionnaires. This was because the questionnaires were distributed in three locations – the company's headquarters and two operational offices. At the headquarters, 135 questionnaires were distributed (and 83 were returned). The remaining 65 questionnaires were sent to the two operational offices and so the researcher could not collect them the same day that the ones filled in headquarters were submitted. After much follow-up telephone calls and visit, the researcher was only able to get back 24 questionnaires of the lot of 65 sent to the operational offices.

In company A and each of the other case organisations, each of the respondents used not more than 50 minutes to completely fill the questionnaire. When each respondent submitted his/her questionnaire, the researcher quickly browsed through it to ensure that all the questionnaires were ticked or circled as the case maybe. In instances whereby the respondent missed one or more answers, they were politely asked to complete the questionnaire. This approach ensured that there was no missing data for any of the questionnaires submitted. However, there were a few cases where respondents failed to return the questionnaire. A breakdown of the nine organisations, the year the companies were incorporated, the number of employees and respondents in each of the case organisations is given in Table 14.

Table 14: Profile of Case Study Organisations

Case Study Organisations	Industry sector	No of employees	Year of incorporation	Contact person	Number of questionnaire distributed	Number of questionnaire collected
Company A	Oil & Gas	518	1988	Executive Director (Services)	200	107
Company B	Oil & Gas	114	1988	Executive Director (Engineering & Technical Services)	50	45
Company C	Health care	32	1979	Managing partner	20	18
Company D	Engineering services (Automobile)	24	2001	Managing Director	15	13
Company E	Business consulting	53	1992	Managing Director	25	20
Company F	Finance (Stock brokering firm)	89	2005	Financial Controller	60	51
Company G	Legal firm	19	1976	Managing partner	15	15
Company H	Legal firm	29	1967	Managing partner	20	17
Company I	Media (community newspaper)	27	2004	Editor-in-chief	20	18

3.7.2.5 Analysing the case organisations

In this research study, qualitative-based procedures were used in analysing the research's case organisations. After the analysis preference was highlighted. The researcher chose to carry out both within case and across case analysis of the nine organisations instead of choosing either to analyse the cases distinctly (that is, within-case analysis) or simply emphasise on more pronounced codes or analytic units across the cases (Neuman 2003). For across the case analysis, the researcher compared the codes and analytic units developed from interview data of senior management from each case organisations so as to highlight similarities and differences of issues raised by senior management in respective case organisations. The similarities and differences (across all the case organisations) were then discussed in detail. On the other hand, as regards within the case analyses, peculiar issues raised during the interviews were summarised and discussed at length in order to indicate the uniqueness of each case organisation. (See Chapter 6, for further read).

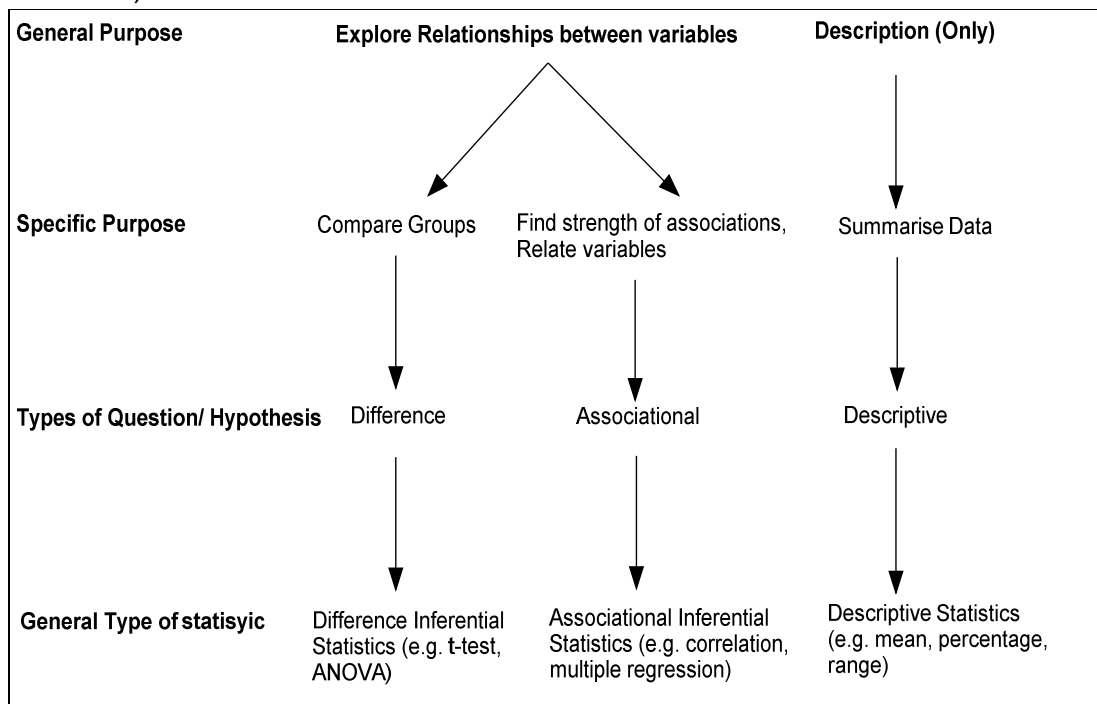
3.7.2.6 Analysing the questionnaires

Quantitative-based analysis techniques were used to analyse the research questionnaires. Most likely than not, these quantitative-based research analyses techniques tend to be used for three broad functions – that is descriptive, differential and associative functions (Morgan et al. 2004; Neuman 2003) as shown in Figure 15. So also, in this study, the questionnaire was analysed based on the three broad functions; descriptive, difference inferential and associational statistics were performed. The processes and general type of statistics used by the researcher to achieve these three functions are as follows:

- i. Descriptive analysis function: The questionnaires were interpreted and a summary of the results were presented in simple comprehensible descriptions and categories (Coakes et al. 2008), in the form of bar charts. Percentages of survey participants' responses to the five point scale used in questionnaire were computed and presented, along with brief descriptions of the how the responses vary across the case organisations.

- ii. The researcher performed the second function, that is differential analysis function, in order to use it as an avenue to lay preference on the researchers' desire to seek to unearth and explain whether there is disparity in how the research variables revealed in the course of the study might likely impact on the research hypothesis results. (See also the reasons put forward by Morgan et al. 2004).
- iii. Lastly, an association inferential quantitative-based analysis was carried out. The researcher's main intent for doing this was to any rational 'associations' that may exist among the study variables (Morgan et al. 2004). Correlation, multiple and hierarchical regressions were used by the researcher to indicate whether there exists (be it either strong or weak) relational characteristics among tested variables. Hence, the extent to which each of the variables deviated or co-varied was used as a basis for either confirming or dispelling the 12 research hypotheses. Thus, just as Morgan et al. (2004) also did, the results from associational analysis conducted in the research were done so as to provide additional evidence for testing the predictability and relevance of assumed relationships between or among the research themes.

Figure 15: Broad functions of qualitative and quantitative research analyses (Morgan et al. 2004)



3.7.2.7 Quantitative techniques used in analysing the questionnaires

Two data analysis computer packages were used; namely, Predictive Analytics SoftWare (PASW which was formerly known as SPSS) version 18.0 and Analysis of MOment Structures (AMOS) version 18.0 which are both compatible with Windows operating system. Respondents' replies to each of the questions were numerically scored and entered into the PASW package (Creswell 2008b). In relation to the five-likert response scale used in this research, a numeric value of 1 was used to signify the least likelihood that a question truly expresses respondents' opinions while a numeric value of 5 represented the highest probability that the question strongly matches respondents' expression or belief. To ensure that the data contained no errors, the data for each of the scale items was checked for outliers and missing parts (Field 2009; Hair et al. 1998; Neuman 2003; Stevens 1984). The second computer package, AMOS version 18.0, is a build-on to PASW although it can be used as stand-alone software.

PASW version 18.0

In this research, the PASW software was basically used for descriptive statistics and exploratory factor analysis. The major tests, conducted with the PASW software, included (a) calculating: (i.) the mean and standard deviations of scale items; (ii.) the frequencies of the scale items; and (iii.) reliability for each of the research constructs observed in this study; and (b) performing (i.) regression analyses and factor analysis. The obtained mean values and frequencies of respondents' answers were used as input data to draw a graph; the intent being to compare the extent to which each of the scale items varied in the case organisations. The frequencies were mainly used for descriptive analysis. Results from the both regression and factor analysis formed the bulk of the framework of the explanatory part of this research.

Reliability analysis

The reliability of a scale item measures the consistency and extent to which the scale considerably measures the single research construct it is designed to assess

(Sekaran 2003). Therefore for a scale to be considered suitable, it must be reliable (Peterson 1994). Thus, the reliability of scale items in studies such as this one relates to the extent to which observed measurements continue to remain unchanged when examined several times provided it is still carried out under the same binding assumptions and instances (Golafshani 2003; Kirk and Miller 1986). The most cited estimate of reliability is the Cronbach's alpha (α) coefficient (Shah and Goldstein 2006; Sijtsma 2009). Cronbach's alpha coefficient estimates range between 0 and 1. Broadly speaking it is commonly argued that the higher or closer the obtained value of the Cronbach's alpha coefficient is to 1, the better the reliability (Nunally and Bernstein 1978).

In consequence, values of coefficient alpha (α) over 0.6 are considered acceptable (Battista et al. 1986; Moss et al. 1998; Nunally et al. 1967; Peterson 1994). Approximated coefficient estimations equal to or greater than 0.90 are considered excellent; obtained estimates that fall between 0.80 and 0.90 are regarded as very good while those that fall within 0.70 and 0.80 are judged to be adequate (Cronbach 1951; Gliem and Gliem 2003; Kline 2005; Nunally and Bernstein 1978; Peterson 1994). A Cronbach alpha coefficient that falls within 0.60 to 0.70 is assumed to be slightly reliable (Reader et al. 2007) and should be provisionally accepted (Triemstra et al. 2010) particularly in exploratory researches (Hotchkiss et al. 2010). Though it is possible to have a value less than 0, such value suggests that respondents' responses are internally inconsistent across the items of the scale (Kline 2005). Based on these recommendations, Cronbach alpha coefficient values were calculated for each of the each of the research constructs observed, across the 9 case organisations. The values obtained in this study were greater than 0.60; thus suggesting that the scale items used in this research are internally consistent and comparatively reliable (Bryman and Cramer 2009; Bryman et al. 2008; Peterson 1994).

Regression analysis

One of the main benefits of performing regression analysis lies in its ability to predict an outcome variable either from one or multiple predictors (Field 2009). Towards this

end, the results of regression analysis help researchers to explain the resulting effects of one or more independents on the dependent variable of particular interest. This makes it possible to establish and measure the validity of the research hypotheses, previously stated in chapter 1. Also, directionalities among the research variables and the scale item constructs (which in this case were developed in the pilot study) can also be better explained. As suggested by Field (2009), a liner model of normal multiple regression analysis statements can be mathematically expressed as shown in equation (a).

$$Y_i = (\beta_0 + \beta_1X_1 + \beta_2X_2 + \dots + \beta_nX_n) + \epsilon_i \quad (a)$$

Y_i represents the dependent (or outcome) variable, β_0 is the point of intercept at which the straight line of best fit crosses vertical axis should a graph be drawn. In addition, β_0 represents the value of the outcome should there be no independent variable (i.e. when X_1 , X_2 and X_n equals zero). β_1 , β_2 and β_n are the regression coefficients of the first, second and nth independent variables. The regression coefficients (β_1 , β_2 and β_n) illustrate to what extent the standard deviations of one or combinations of the independent variables would be altered when the standard deviation of the independent variable increases by 1; β_1 is the increase or decrease in the predictability of the dependent variable when the first independent variable is used as the sole predictor and β_2 represents the accounted coefficient when both the first and second independent variables are used as the predictors for the outcome. In the course of interpreting the results of the regression analysis, it was taken in this research that instances where the regression coefficients were negative indicated a reverse association between that predictor and noted outcome (Field 2009).

Examples of other regression parameter estimates that can be reported in PASW output, if selected, are the F-ratio and the Durbin-Watson estimate. According to Field (2009), the F-ratio expresses the level of certainty to which the regression analysis can accurately predict the exact nature of relationships between the independent variables and the dependent variables. For a two-tailed test, the ratio is significant at significant value of $p < 0.001$. Durbin-Watson tests are performed in order to examine for serial correlations between adjacent residuals or independent

errors (Field 2009). A Durbin-Watson value equal or close to 2 means that the residuals are uncorrelated (Field 2009; Nerlove and Wallis 1966), implying that the regression analysis can be trusted (Granger and Newbold 1974).

Factor Analysis

Factor analysis, known as dimension reduction in PASW, enables researchers to achieve “parsimony by using the smallest number of explanatory concepts to explain the maximum amount of common variance in a correlation matrix” (Tinsley and Tinsley 1987). In the research, the variables of the scales were reduced to the smallest possible interrelated scale items that are still internally consistent. The two usually reported measures for assessing whether a pending factor analysis would result in distinct factors are the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity. Normally, both tests are used in order to observe whether the patterns of correlations established in the factor analysis were distinctly different and to ascertain that the variables are suitable for factor analysis (Field 2009). Guided by the recommendations of Hutcheson (1999), Kaiser (1974) and Field (2009), who proposed that KMO values should preferably be more than 0.6 to show that the analysis would yield distinct factors and that the Bartlett’s test of sphericity should be significant (at a significant value of $p < 0.05$, 2 tailed).

All the factor analyses performed in this research were satisfactory (that is, had values greater than 0.6) and the obtained values of the Bartlett’s test of sphericity were significant. A concise guide that can aid in the selection of any of these extraction methods is summarised in Table 15. Of all of these seven extraction methods, principal components analysis, principal axis factoring and image factoring are the more favoured methods among researchers (Field 2009; Riekert and Eakin 2008) simply because they produce more accurate and similar results (Riekert and Eakin 2008). Despite the limitation of the results achieved through these two extraction methods (i.e. principal components analysis and image factoring) being only valid for the data set of the variables measured, they are still have the highest probability of producing unrelated factors (Tinsley and Tinsley 1987). Hence, the

principal component analysis adopted for this research was the extraction method because the researcher's aim was to explore and describe all the factors extracted.

Table 15: Methods of factor extraction (adapted from Tinsley and Tinsley 1987)

Type	Descriptive	Inferential
Exploratory	Principal components Principal factors Image analysis Minimum residual analysis	Canonical factor analysis Maximum likelihood Alpha factor analysis
Confirmatory hypothesis testing	Multiple group LISREL (or AMOS)	Confirmatory maximum likelihood LISREL (or AMOS)

Once the factors were extracted, using the principal component analysis, only extracted factors that had eigenvalues of 1.0 or more were retained for further analysis (Field 2009; Kaiser 1974). The researcher's rationale was guided by Field's (2009) argument that factors with eigenvalues of 1 or more account for a significant amount of variation. As an option, the extracted factors were then rotated in order to get a more discrete and explainable solution. There are two existing methods through which factor analysis can be performed – namely, oblique (direct oblimin and equamax) and orthogonal rotation (varimax, quartimax and equamax). A researcher's choice of which of these two factor rotation techniques to use is, however, dependent on whether it is to be used for exploratory or confirmatory factor analysis (Cureton and Mulaik 1975). Furthermore, it depends on how researchers would want to explain the outcome of the rotation. Nonetheless, the varimax rotation was (Cureton and Mulaik 1975) and still seems to be the most presented rotation method and/ or orthogonal rotation among researchers. Some of the explanations that researchers give for this indicate that:

- a) varimax rotation yields factors that are distinctive and uncorrelated (Field 2009; Tinsley and Tinsley 1987);
- b) orthogonal rotations, of which varimax rotation is one, are believed to be more empirically advanced than oblique factor solutions (Tinsley and Tinsley 1987);
- c) varimax rotation seeks to maximise the spread of factor loadings for a variable across all factors (Field 2009);
- d) varimax rotation is best for first (exploratory) factor analysis as it gives the most analysable and easiest interpretation of factors (Field 2009; Goldberg and Hillier 1979; Riekert and Eakin 2008);

Based on these lines of reasoning, in this research, varimax orthogonal rotation was chosen above all other types of rotation. In PASW version 18.0, variables that supposedly define the same underlying unobserved constructs are assumed to correlate with one another and are therefore combined into one factor. Variables that had factors loadings of absolute value of 0.4 or more were the only variables considered being of substantive importance (Battista et al. 1986; Field 2009; Stevens 1992). Although some researchers, e.g. Tinsley and Tinsley (1987) and Stevens (1992), advocate that factor loadings of 0.30 or higher are equally important and sufficient. Bagozzi and Yi (1988) and Moss et al. (1998) suggest that factors should have at least an absolute value of 0.5 before it is extracted. In this research, variables that had factors loadings of absolute value than a value of 0.4 were extracted.

AMOS version 18.0

Analysis of MOment Structures, abbreviated AMOS, is an easy-to-use computer-based software used for conducting Structural Equation Modelling (SEM). SEM analysis and simulation dates back to the early 1900s (Bollen 1989) but did not gain much prominence until the 1980s (Shah and Goldstein 2006). SEM has increasing applicability in theory building and empirical model building (Anderson and Gerbing 1988; Bagozzi and Yi 1988; Fornell and Larcker 1981; Shah and Goldstein 2006) especially in a research that involve non-experimental methods (Byrne Barbara 2001). Hence, SEM can be used for appraising how valid and posited researchers'

hypotheses are, or how accurate the evaluations of the sampled data or to-be generalised population are (Shah and Goldstein 2006).

Citing Weston and Gore's (2006) definition of SEM, Gallagher et al. (2008) recounted SEM to be "a hybrid of factor analysis and path analysis". Just as other quantitative-based statistical software (e.g. LISREL, PASW) that can perform correlation analysis, multiple regression analysis and analysis of variance, AMOS subprograms of SEM are also general linear models (Roberts et al. 2010; Shah and Goldstein 2006; Weston and Gore 2006). In conclusion, SEM is better situated in specifying, identifying, estimating, modifying, analysing and validating very complex theoretical relationships and hypotheses among observed and unobserved variables (Byrne Barbara 2001; Kline 2005; Schumacker and Lomax 2004; Weston and Gore 2006).

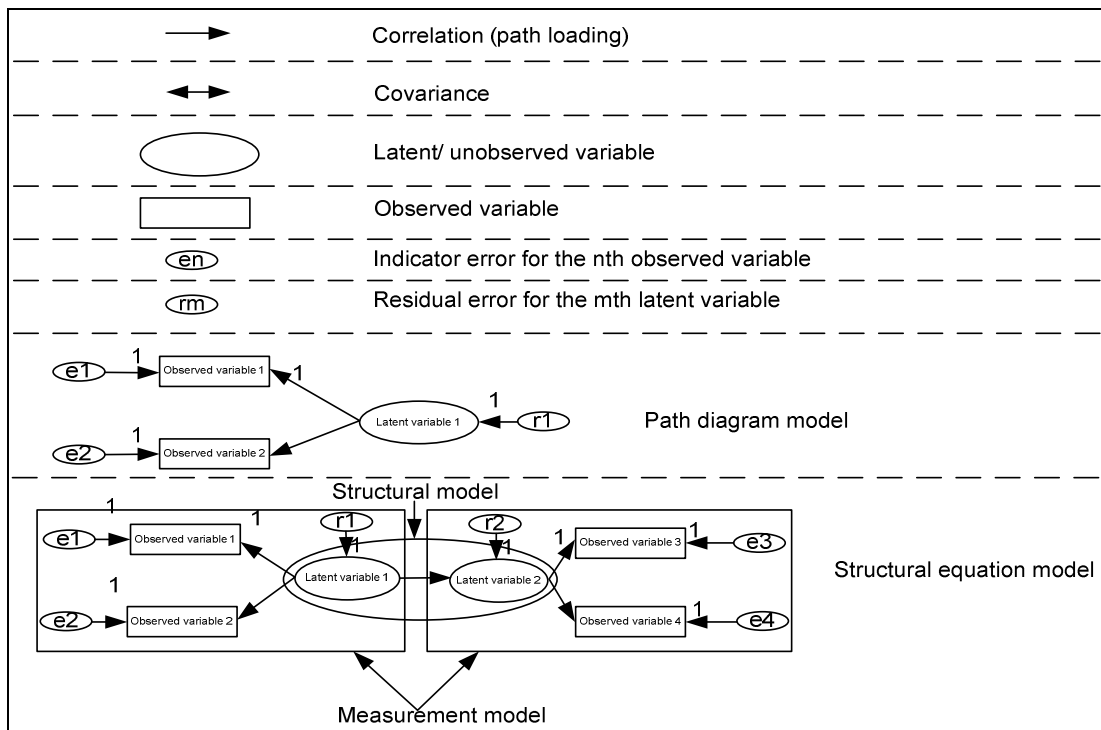
Based on sufficient and valid theoretical premise (Bagozzi and Yi 1988), following the two-step approach encouraged by Anderson and Gerbing (1988), the researcher used AMOS to carry out SEM in order to establish if the data collected supports the research's hypothesised relationships (Roberts et al. 2010; Roberts et al. 2010; Schumacker and Lomax 2004). In SEM, there are a few conventional terms (see Figure 16). An unobserved construct or factor, represented by an ellipse in AMOS, is one which defines those types of research constructs that cannot be directly measured, but can be outlined by a group of variables that are assessable (Schreiber 2008). The unobserved construct or factor is called a latent variable.

An observed variable or an indicator is represented by a rectangle. In SEM, it is presumed that a hypothesised model will most likely have two types of errors namely residual error and measurement or indicator error (Bollen 1989; Schreiber 2008). Measurement errors report any overlooked though possible variables that could likely influence the variation in the observed variables used (Schreiber 2008). Similarly, residual errors account for the variations of the unused factors that could possibly be used to describe the latent variables. In this research, measurement errors in a model are represented as $e_1, e_2 \dots e_n$; where n is the number of observed

variables in the model. Correspondingly, residual errors are labelled as r_1, r_2, \dots, r_m where m is the number of unobserved variables in the model under consideration.

The unstandardised regression weights for both the measurement or indicator error and the residual error are always set at 1 (Byrne 2001; Schreiber 2008; Weston and Gore 2006). Independent variables are referred to as predictors while dependent variables are tagged analysis outcomes. A hypothesised model describing the relationships between observed variables and unobserved variables is called the measurement model, whereas the structural model predicts the correlational associations among the research factors or latent variables. A path is presumed to be the linear representation of the association between two variables (Schumacker and Lomax 2004). The direct relational effects among unobserved variables simply depict the correlations between, and among the unobserved variables being considered. There are primarily two types of arrows in AMOS. The double headed arrow stands for the covariance between observed or unobserved variables, and the single headed arrow illustrates correlation between dependent and independent variables.

Figure 16: Basic conventional terms used in AMOS



Primarily, SEM data analysis has the capability to analyse and establish relational association among observed and unobserved variables (Byrne Barbara 2001). A typical SEM would consist of a regression analysis, path analysis and confirmatory factor analysis (CFA). Regression analysis using AMOS is in many ways similar to the PASW method described earlier. The presented regression (correlation) coefficients provide researchers with the opportunity to identify the level of influence that the independent variables would have on the dependent variable. In specific terms, it relates the amount of standard deviations to which the predictor would either increase or decrease should the predictor increase by one standard deviation. In addition, regression analysis results highlight the degree of variance that the independent variable accounts for in dependent variables.

Path analysis offers researchers the prospect of performing “simultaneous regression equations that theoretically establish the relationship among the observed variables in the path model” (Schumacker and Lomax 2004). As such, all the variables and their effects on one another can be examined. In line with this, a path diagram is a visual representation of all hypothesised associations of the variables that are being considered. Founded on adequate theoretical assertion, path analysis basically entails: (a) presenting a diagrammatic representation of causal relationships that are apparent among variables considered, in order to provide a better understandings, and simultaneously (b) establishing or disproving causal relationships among the variables considered (Byrne 2001). Thus, the process of estimating and testing hypotheses becomes easier and more reliable than other data inferential methods (Byrne Barbara 2001; Weston and Gore 2006).

In most cases, confirmatory factor analysis is used to appraise how well the hypothesised models are supported by the data (Anderson and Gerbing 1988; Byrne 2001; Mulaik et al. 1989; Schreiber 2008; Schumacker and Lomax 2004). An example of this is the part that emphasises the measurement model of the SEM; that is, the relationships of latent variables. The confirmatory factor analysis will more likely produce credible and explainable results once the suggested relationships and covariance among the latent variables are well grounded in theory (Schumacker and

Lomax 2004; Shah and Goldstein 2006). Through this process, researchers validate whether their data is applicable in real life” and explainable within the knowledge and discipline bounds under which the investigation is being carried out (Barrett 2007a). Once this has done, a researcher will effectively avoid getting either a Type I or Type II error (MacCallum et al. 1996). For this reason, researchers established both absolute and incremental fit indices with which they can assess the validity and Goodness-of-fit index of their models (Bagozzi and Yi 1988; Barrett 2007a; Shah and Goldstein 2006).

Goodness of fit index (GFI) or Adjusted Goodness of fit index (AGFI) illustrates the probability that the specified model can reproduce the observed covariances and relationships of the model (Roberts et al. 2010). Its value ranges between 0 and 1; where an index closer in value to 1 represents a perfect fit and a value closer to 0 indicates lack of fit (Mulaik et al. 1989). Generally, it is recommended that a satisfactory model will not be less than 0.9 (Bagozzi and Yi 1988). Although the Goodness of fit index (GFI) is a frequently used model-fit indicator, researchers are advised not to rely solely on using the index but should endeavour to use it alongside other assessment of fit indices (Mulaik et al. 1989; Shah and Goldstein 2006; Steiger 2007). Mulaik et al. (1989) considered that such an approach would provide researchers the ability to not only assess their research models’ fit but also work out how close their models would have fitted.

Additional common fit indices that researchers use for assessing the goodness of fit of models include: Chi-square likelihood ratio test, Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), Adjusted Goodness of Fit Index (AGFI) and Root Mean Square Residual (RMR). Many researchers have, however, expressed their discontent regarding some of these additional indices. For example, Shah and Goldstein (2006) advised that both GFI and AGFI might tend to indicate poor GFI for a sample size less than 250. Nonetheless, this set of indices remains critical in determining the overall fitness and validity of structural equation models (Bollen 1989; Hu and Bentler 1998; Shah and Goldstein 2006). A brief overview of each of these supplementary indices is presented next.

- i. Chi-square, χ^2 , statistics: This is the conventional overall test of fit (Hu and Bentler 1998; MacCallum et al. 1996), and so unsurprisingly the most frequently index used by researchers to assess the overall goodness of fit of structural equation models (Shah and Goldstein 2006). As such, many researchers would argue that Chi-square statistics remains one the substantive test of fit for structural equation models (Barrett 2007a; Weston and Gore 2006). Barrett (2007a) actually contends that this should be the only prominent fit index that researchers report. This has, however, been countered and dismissed by Goffin (2007). Schreiber (2008) offered neutral ground in his paper, by suggesting that though it is relevant to report the Chi-square tests, it is essential that the test results be used to validate the fitness of the model to the data.

This is because Chi-square is largely affected by sample size (Schreiber 2008). Barrett (2007b) also advised researchers to be cautious of using Chi-square statistics as it tends to reject models where the sample size is large. However, in a number of studies it has somehow become the norm to report the Chi-square, χ^2 , value with its corresponding degrees of freedom (see Shah and Goldstein 2006). Generally, a hypothesised model is considered an acceptable fit when the Chi-square value χ^2 is non-significant (Shah and Goldstein 2006; Weston and Gore 2006).

- ii. Chi-square likelihood test (or normed χ^2): This is the ratio of the obtained Chi-square, χ^2 , to the degrees of freedom in the model (i.e. $\chi^2 / \text{d.f.}$). Shah and Goldstein (2006) and Schumacker and Lomax (2004) pointed out that a ratio less than 1 possibly means that the model is over-fitted, and a ratio value greater than 3 can be a sign that the parameters used to describe the model are insufficient. An ideal fit will have a normed χ^2 value of 1 (Maruyama 1997).
- iii. Comparative Fit Index (CFI): This is similar to the GFI and AGFI. CFI offers value between 0 and 1. The closer the index is to 1, the better the model will be for the data analysed (Hu and Bentler 1998; Schreiber 2008). It has been found to be the most sensitive to model misspecification, and on the other hand less sensitive to sample size (Hu and Bentler 1998).

- iv. Root Mean Residual (RMR): This is the square root of the standardised average squared amount by which the model variances and established relationships differ from the obtained estimates (Hu and Bentler 1998). It is used in assessing the fit of two different models with the same data (Schumacker and Lomax 2004). Ideally, a low RMR indicates a good fit (Bagozzi and Yi 1988). Schreiber (2008) proposed a value less than 0.09 should be used as cut-off point while Schumacker and Lomax offered that a value less than 0.05 indicate a good model fit.
- v. Root Mean Square Error of Approximation (RMSEA): According to Schreiber (2008), a RMSEA index that falls between a confidence interval ranging from 0.00 to 0.08 indicates that the model is a close or good fit. Hu and Bentler (1998) however, hinted that care should be taken when interpreting RMSEA as it tends to over-reject substantially good models. Thus, index values that fall between 0.08 and 0.01 should be acceptable but as mediocre fit (MacCallum et al. 1996). RMSEA is also less sensitive, just as RMR is, to sample size (Fan et al. 1999; Hu and Bentler 1998).

A summary of the recommended range for these indices is presented in Table 16.

Table 16: Recommended range of fit indices

No	Fit index measures	Preferred range	Reference authors
1	Chi-square likelihood ratio test	$1 < x < 3$	Shah and Goldstein (2006); Schreiber (2008); Carmines and McIver (1981)
2	Chi-square, 2, statistics (with p-value ≥ 0.05)	Non-significant	Bagozzi and Yi (1988); Weston and Gore (2006); Barrett (2007b); Schumacker and Lomax (2004)
3	Goodness of fit index (GFI)	≥ 0.9	Bagozzi and Yi (1988); Schreiber (2008); Hu and Bentler (1998); MacCallum et al. (1996)
4	Adjusted Goodness-of-Fit Index (AGFI)	≥ 0.9	Bagozzi and Yi (1988); Schreiber Schreiber (2008)
5	Comparative fit index (CFI)	≥ 0.9	Schreiber (2008); Hu and Bentler (1998)
6	Root Mean Square Residual (RMR)	≥ 0.08	Carmines and McIver (1981); Hu and Bentler (1998); MacCallum et al. (1996)
7	Root Mean Square Error of Approximation (RMSEA)	≥ 0.08	Hu and Bentler (1998); MacCallum et al. (1996); Fan et al. (1999); Schumacker and Lomax (2004); Steiger (1990)

3.7 Validity of this research

3.8.1 Validity of the pilot study research

Generally, the validity of this research can best be assessed when the skill, experience and effort of the researcher are considered (Golafshani 2003; Patton 2002). Validity in qualitative research indicates the extent to which researchers' findings accurately addresses or represents what is being studied (Neuman 2003). It refers to an elaborated concept that suggests that the research's data and/or findings fit suitably with actual reality (Neuman 2003). Basically, it depicts a researcher's checks for accuracy of his/ her research plans, design, procedures and findings (Creswell 2008a). This can be done as Gibbs et al. (2007) suggested by (a) repeatedly checking the research data in order to ensure that all errors are identified and promptly corrected; and (b) that the criteria for classifying the data into themes are consistent when reviewing the interview transcripts. In most cases, researchers explain and provide evidence that these two validity requirements were achieved via triangulation (Creswell 2008a). Triangulation of data involves collecting data from different sources and using it to provide supporting arguments to buttress research arguments and findings. It builds on the principle that individuals understand things or circumstances better when viewed from multiple perspectives than from a single perspective (Neuman 2003).

In this research, all the four types of triangulation presented by Neuman (2003) were carried out. Triangulation of observers involves conducting several, but the same type, interviews in respect of what is being studied. In this work, during the pilot study, several persons were interviewed using the same type of interviews and their responses were carefully analysed, compared and merged to form the research themes. One major benefit of triangulation of observers is that it presents researchers the fuller picture of things (Neuman 2003). Triangulation of "measures" entails the use of multiple measures of the same phenomena. The questionnaire used consisted of many sections that were used to assess relating phenomena. Triangulation of "theory" requires researchers using multiple theoretical perspectives to plan or interpret their research data. In this research, every process or method adopted was justified and clarified using literature and/or theory. This process entails

giving detailed descriptions of the research settings, participants' perceptions, limitations and challenges (Creswell 2008a). The last type of triangulation (i.e. triangulation of "method") illustrates a research approach where mixed research methods are used. At the later stage of this study, both qualitative and quantitative research methods were used.

In addition to triangulation process, researchers can also use knowledgeable persons in their field of study or their peers to confirm the accuracy of the interpretation of their data (Creswell 2008a). That is to say, research can be validated by using independent knowledgeable persons to confirm or dispel research processes and/or findings (Creswell 2008a). This process helps to reduce researchers' bias towards the interpretation of research participants' response (Creswell 2008a). All through the research process, the researcher met regularly with two supervisory academic persons to review: (a) what the researcher had done in the research, (b) what the researcher was doing, and (c) what needed to be done in the research. After each of these periodic reviews, corrections and amendments were made as advised by these persons.

3.8.2 Validity of the case study research

Validity is essentially ensuring that the adopted research approaches or procedures measure what it is designed to examine (Field 2009). Validity in case study research can be tested and achieved through construct validity, content validity, internal validity and external validity (Yin 2009). Internal validity seeks to identify and establish rational causal associations in a research. According to Yin (2009), typical tactics used in a case study research to establish internal validity include pattern matching, explanation building, and using logic models. A table, originally developed by Yin (2009), showing other case study tactics for establishing validity in case researches is presented in Table 17. All through this study, the researcher duly adhered to all the case study tactics offered for each of the phases of research in which each tactic occurs.

Table 17: Case Study Tactics (Yin 2009)

Tests	Case Study Tactic	Phase of research in which tactic occurs
Construct validity	Use multiple sources of evidence	Data collection
	Establish a chain of evidence	Data collection
	Have informants review draft case study report	Composition
Internal validity	Do pattern matching	Data analysis
	Do explanation matching	Data analysis
	Address rival explanations	Data analysis
	Use logic models	Data analysis
External validity	Use theory in single-case studies	Research design
	Use replication logic in multiple-case studies	Research design

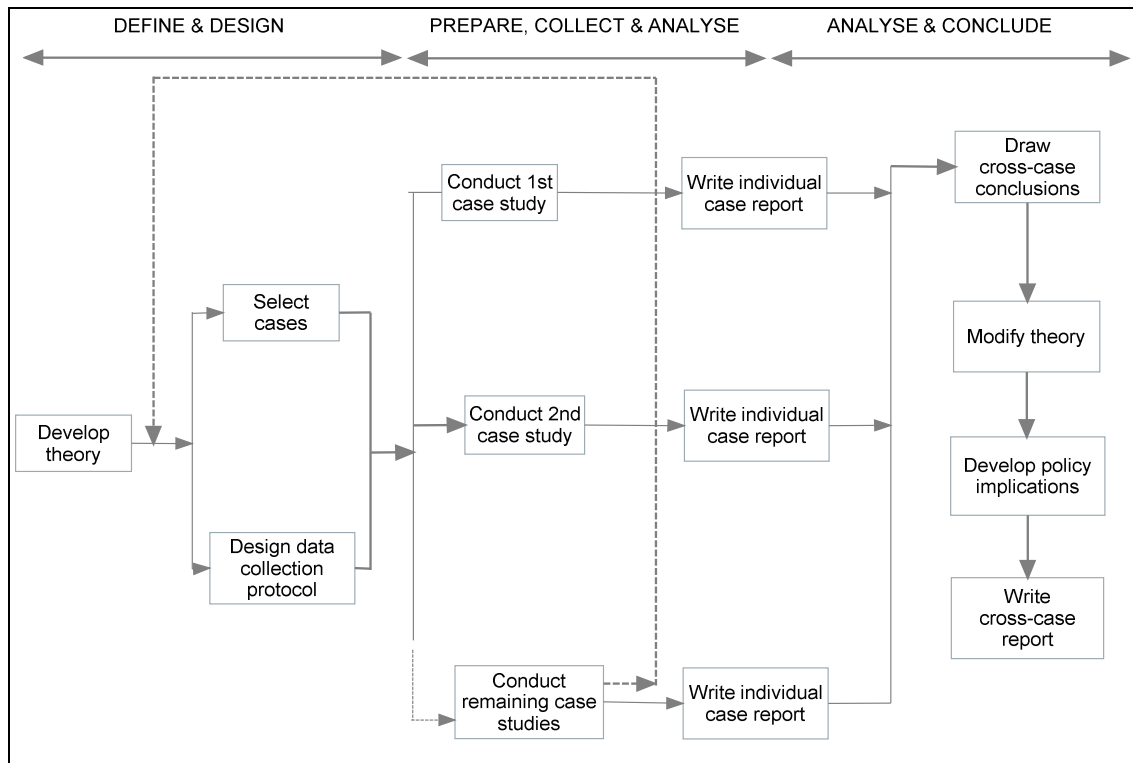
3.8 Generalisation of this research study

Generalisation of research involves: (a) creating a representative sample of cases or units or analysis that closely represents features of interests in a larger population from which the cases are drawn (Gomm et al. 2000; Neuman 2003; Yin 2009); (b) explaining and comparing select research features or findings in-depth either within or across cases (Neuman 2003; Stake 1995; Yin 2009); and (c) grouping research findings in to a class of events or categories of cases based on contextual resemblances and differences (Miles and Huberman 1994; Neuman 2003). Generalisation in quantitative research usually involves statistical probability, while in qualitative researches generalisation would take the form of theoretical abstraction (Easterby-Smith et al. 2002). A few researchers argue that case study research lacks rigor research and so results from case study research are less generalisable since it normally considers few cases (McCutcheon and Meredith 1993). As such, it is believed that case study results are only applicable to the cases considered – meaning that there exists no justification to externalise the findings (Hamel et al. 1993). However, Yin (2009) has countered all of these lines of reasoning.

In a case-based research, generalisation of findings typically entails the aggregation or comparison of independent studies (Hammersley 1992; Schofield 2002). According to Gomm (2000), generalisation can be achieved either from empirical generalisation from studied to unstudied cases or collection and presentation of information about the case and the population under consideration. The first approach greatly depends on how knitted and similar the cases are while in the second approach similarity among cases is more emphasised in relation to the relevant aspects of cases that were studied. In either case, detailed information describing all the adopted processes that were used to address and/or support these claims must be made available (Gomm et al. 2000). Doing so, on one hand, helps researchers to argue the transferability of their research process and/or results (Donmoyer 1990) and, on the other hand, helps to prove that the research was rigorous (Yin 2009). Two of such approaches involve designing a case study case study protocol and database (Yin 2009).

In addition, regarding the generalisation of case study findings, Yin (2009) advocated that generalisation of case study findings should be likened to how findings are generalised in experiments (Yin 2009). This means that generalisation in case study research should be analytical and carried out in such a way that previously developed theories are used as basis and groundwork for which to compare results of the case study (Yin 2009). Across observed cases, all procedures adopted should be replicated. Basically, replication logic plainly implies that the researcher ensures that the conditions, concepts and protocols adopted for the case study research are reproduced and adhered to strictly throughout the multiple cases considered. This, if done properly, would greatly improve the research's external validity. Case study research is presumed to be externally valid if the case study's findings are duplicated, and can be generalised beyond the immediate cases under observation (Yin 2009). Therefore, all through the multiple case studies, the replication logic was adapted (Voss et al. 2002; Yin 2008). A graphic representation of case study replication logic, which was put forward by Yin (2009), is shown in Figure 17.

Figure 17: Replication for case study research method (Yin 2009)



3.9 Chapter conclusion

A brief overview of how the researcher ensured that the research was valid, reliable and rigorous is presented in Table 18. In summary, in this chapter, research design and methodology has been discussed in detail. In addition, this study's adopted research design and/or methods have been justified. In other words, the extent to which these adopted research methods, based on existing literature, are relevant and useful to this research have been outlined. In the next chapter, the results of pilot study are presented and in chapter five the case study results are presented.

Table 18: Application of Yin's (2009) case study tactics

Tests	Case Study Tactic (Yin 2004)	Case study tactics as applied in this study
Construct validity	Use multiple sources of evidence	<ol style="list-style-type: none"> 1. Pilot study was conducted. 2. In the main study, survey and interview research methods were used. 3. Historical records, documents of case organisations were used. 4. Extant literature on subject of research was reviewed.
	Establish a chain of evidence	<ol style="list-style-type: none"> 1. Respondents' answers acquired during the pilot study were transcribed. 2. Emergent themes were developed from the transcribed data. 3. Emergent themes were used to design the questionnaire used for the main study. 4. Emergent themes were then used to develop questions senior management staff in case organisations were asked. 5. All data collected were organised and documented; that is a database was created.
	Have informants review draft case study report	<ol style="list-style-type: none"> 1. Three senior academicians reviewed the report. 2. The case study reports were discussed with case organisations.
Internal validity	Do pattern matching	<ol style="list-style-type: none"> 1. Theoretical and observed theories were matched. 2. Theory was tested using the case study results by trying to confirm or disapprove the research hypotheses 3. Quantitatively analysed data was matched with qualitatively analysed data. 4. Senior managements' interview responses were matched with their subordinates survey responses.
	Do explanation matching	<ol style="list-style-type: none"> 1. Applicable theory was used. 2. Emergent themes derived from the pilot study were further confirmed in the main study. 3. Causal explanations are presented in the report. 4. Theoretical and observed theories were matched. 5. Generalisation was made from established theoretical relationships.
	Address rival explanations	<ol style="list-style-type: none"> 1. Check and balances were put in place to ensure research findings are credible. All research options were considered and well defined before the most appropriate ones were chosen. 2. Coding and thematic analysis was performed to confirm distinction of research results. 3. Emphasis were made in the choice of the research methodological to show that no other method would produce the same results. 4. Both theoretical and observed arguments are presented to present better explanations of research findings. 5. All factors that could influence the outcome of the research were considered.
	Use logic models	<ol style="list-style-type: none"> 1. Both positivism and subjectivism viewpoints were adopted. (Mixed research methods) 2. Cross-case analysis was performed.
External validity	Use replication logic in multiple-case studies	<ol style="list-style-type: none"> 1. Data source, data analysis, methodological and theory triangulation was performed. 2. Research protocols were developed and replicated all through case organisations.

4.1 The results

The pilot study questions were constructed in such a way that allowed the interviewees to freely express themselves. Each of the interviews conducted were however brought to a close after the interviewees seemed to have exhausted their opinions on the question being asked and “could no longer evoke any new elements considered useful and supportive” (Szamosi and Duxbury 2002)’. Responses to all the questions were analysed along two main objectives. The first set of questions centred on identifying typical changes that respondents’ organisations have either implemented (that is, not more than 10 years before the interview date), and are currently implementing in recent years (i.e. ≤ 3 years from the time of the interviewed date) or plan to implement (not later than 2 years from interview date) . Also, the questions explored informants’ initial expectations of their described organisational change types, their roles, responsibilities and contribution of how successful their mentioned changes were. Respondents were asked to state specific challenges they had encountered in the process of implementing, managing and sustaining their mentioned organisation changes.

The later part of the interview session was both retrospective and futuristic. The interview questions were drafted with the aim of exploring what organisations that succeeded with their change programs did differently when compared with those organisations that were unsuccessful. To do this, the researcher drew up a profile for each of the noted change initiatives deliberated upon during the interview sessions. Each depicted profile consists of how respondents perceived each of their implementations outlined, issues identified in association with each of the organisation-wide change types considered and its effects on organisation’s capability and capacity to retain long term performance. Thereafter, the researcher mainly sought to know (i) whether respondents or (ii) how respondents would act differently if posed with another opportunity to execute similar change types.

4.1.1 Type of Change initiatives

Across business organisations in Nigeria at the organisation-level, as cited and shown in Chapter 1, there are incontestable signs that organisations are finding it harder to operate and as a result they are constantly working out ways to improve on their effectiveness and operability by undergoing improvement-inclined organisational changes. To narrow down common change types being implemented, a list of different change types of particular interests to the researcher and those that Nigerian researchers have examined in both past and recent times was developed. At the beginning of the interview, the researcher presented the list to each of the respondents and they were asked to state which of the change types that they were/are conversant with or had implemented either in the past, or are presently implementing or plan to implement. In order to make provisions for other types of change initiatives that were not included in the list, the researcher appealed to the respondents to make additional suggestions of any change initiative that their organisations might have implemented but were not included in the list.

At the end, only five change types from the list put forward had either been implemented, or are being currently implemented or are being proposed to be implemented (see Table 19). These five change types are: (1) Changes to management and organisational structure (which included layoffs); (2) Lean thinking/philosophy and implementation (this describes organisations' attempt to optimise their processes and/or systems); (3) Enterprise Resource Planning (ERP) Systems e.g. SAP; (4) Customer Relationship Management Systems (that is, in-company service quality improvement techniques); and (5) Quality Management Systems (centres around improving product and process qualities, and examples include the following certifications – International Organisation for Standardisation, Standard Organisation of Nigeria, Nigeria Nuclear Regulatory Authority and other Industry Standard Assurance and Accreditation Processes).

In total, fifty-seven change initiatives were described. Two respondents (Int. 5 and Int. 12) discussed their roles, expectations and outcomes as regards to changes to management and organisational structure. While Int.12 talked about one that had happened in the past, Int.5's example was presently on-going at the time of the

interview. Over the career of Int.12 at a state-owned corporation, he has experienced nothing less than ten different management changes at different times. According to him, “this type of organisational change is a norm in government corporations. With each regime change (military or civilian) comes another management restructuring”. Now that he (Int.12) owns his own consulting firm, one of the things he is advocating for is for the Nigerian government to ensure continuity especially in policy implementations.

Likewise, Int.5 works in a government-owned enterprise. Int.5 has seen two untimely terminations of top executives in relation to changes to management structure, and he is actively involved in the third. Int.5 also believes it has become an acceptable pattern for such changes to occur – His words: “Though I am a beneficiary of this on-going reconstitution, I will be foolish not to realise that it is time-bound. When I mean time-bound, I am not talking about the two-terms of 4 years each of which comes with the office of a deputy vice-chancellor... I mean the governor can wake up tomorrow and set up a panel in the name of scrutinizing and concerns of lower standards which will see us all being placed on mandatory leave – and most likely will not come back to our positions” (Int.5).

Pertaining to Lean thinking/ philosophy and/or implementation, all interviewees had something to say about Lean thinking/ philosophy and its implementation. However, a substantial number of respondents that have or have had managerial experience in manufacturing organisations (Int.1, Int.2, Int. 4 and Int.17) and multinational organisations (Int.19 and Int.20) knew right away what was being asked. Int.4 defined Lean thinking as “the process whereby an organisation optimises its core operations by focusing more on value-adding activities than non-value adding changes or activities in order for the organisation to become more effective and efficient”. However, the remaining fifteen who acknowledged they have done or are doing or will do something in line with Lean thinking/ philosophy and/or implementation, initially craved further clarification on what the researcher meant.

Thus Lean thinking/ philosophy and its implementation were explained as “an operational strategy for maintaining competitive advantage by means of streamlining

processes so as to ensure that scheduled works are done right the first time. That is, a process mainly deployed towards achieving more profitable work by eliminating wastes". Examples of wastes were cited and described (i.e. the 7 wastes of Lean thinking – overproduction, excessive transportation, inventory, unnecessary motion, defects, waiting and inappropriate processing). Yet, a significant number of the respondents were quick to attribute Lean thinking to staff retrenchment. Based on this assertion, one could state that the concepts and techniques of the Toyota Production Systems from which Lean philosophy and methodology evolved is a fairly new conception among top leaders in corporations across Nigeria.

The implementation of ERP systems was the second most popular type of change initiative amongst respondents. Seven of the respondents (Int.1; Int.3; Int.4; Int.5; Int.13; Int.10 and Int.15) indicated that their organisations had implemented one form of ERP system in the past, which is ≤ 10 years. Int.2, Int.11, Int.14 and Int.20 all said they were at different stages of implementation while three others (Int.7; Int. 8 and Int.21) stated that their organisations had one form of resource planning system but were also considering implementing SAP system in the near future. There was however a peculiar case, that of Int.1. The interviewee's organisation had implemented SAP in the past but it was a sheer failure. As a result, his organisation is re-implementing it all over again.

In respect to Customer Relationship Management systems, seven of the respondents (Int.7; Int.12; Int.13; Int.16; Int.17; Int.20 and Int.21) – all of which hold executive positions in organisations that offer more services – were either refining, reviewing or upgrading their service quality improvement tools. The last three (Int.8; Int.11 and Int.14) that discussed customer relationship management pointed out that their organisations have a highly effective process in place. Regardless, all ten respondents confirmed that "customer relationship management must not cease" (Int.7); meaning "it is a never-ending process" (Int.16). By that, to get the best out of it: "organisations that invest in such must ensure that they also create an open but informal feedback system" (Int.8). Not only that, "criticisms and complaints must be taken seriously... How it is interpreted and what organisations do with the

interpretations can impact greatly on the organisations, especially when there are equally good firms that offer similar or slightly better services” (Int. 8).

Lastly, the thrust to implement and maintain quality management systems received good credence as well from ten of the respondents. Two of these respondents’ (Int.1 and Int. 17) organisations are working out strategies on how to revamp their existing quality management systems. Interestingly, almost all (i.e. eight of the ten) the respondents that talked about customer relationship management also discussed how their organisations were making all endeavours to maintain or improve their quality management system. This prompted the researcher to ask if these respondents see any correlation between customer relationship management and quality management. Nine answered in the affirmative. Examples of some of their views are as follows:

“Customer relationship management surely go hand-in-hand with organisation’s attempts to maintain quality” (Int.16).

“The best way to manage your customers is to continue to meet your customer’s expectations – which simply means while you go all-out to manage your customers, you still make efforts to push the quality bar higher” (Int.8).

“To start with, organisations need to ask themselves why customers patronise them... The unarguable answer is that the features which your service or product offers is what delights them” (Int.13).

So, “any organisation that wants to continue to enjoy this success must take customer management as one eye of the organisation and the process of upholding quality should be the other eye” (Int.11).

In view of all these,

“Customer relationship management is equally important and critical as quality management” (Int.20).

Table 19: Types of typical Organisational Changes Discussed

Types of organisational changes discussed	When is/was it?	No. of cases discussed	Total no. of cases
Changes to management and organisational structure	In the past	1	2
	Presently/ On-going	1	
	Probably	x	
Lean thinking/philosophy and implementation	In the past	5	21
	Presently/ On-going	15	
	Probably	1	
Enterprise Resource Planning (e.g. SAP)	In the past	7	14
	Presently/ On-going	4	
	Probably	3	
Customer Relationship Management (i.e. service quality improvement tools & techniques)	In the past	3	10
	Presently/ On-going	7	
	Probably	x	
Total Quality Management (e.g. ISO certifications; standard accreditations)	In the past	4	10
	Presently/ On-going	5	
	Probably	1	
x - Not Applicable			

4.1.2 The success rate of the changes, in terms of expectations-met

In order to evaluate whether each of the respondents' stated change initiative(s) did meet pre-marked expectations, each of the respondents was asked: (i) to explain their organisations' respective circumstances and motivation for implementing the type of change initiative they had mentioned; and (ii) to assess whether the change attempts were successful or not. As regards to the second statement, to make it plain and comprehensible, successful change initiatives are taken as those that the respondents felt to 'a significant extent' were able to meet pre-stated business desires and needs. A significant extent as used above translates to a change situation whereby the change type actually bettered the organisation in which it was implemented and had no immediate reverse impact on the organisation's performance. In other words, as stated earlier in this research, business-change initiatives are taken to be effective and successful only when: (a) it produced the required change (Beer et al. 1994); (b) it produced the expected results (Schaffer and Thomson 1992); and (c) the end-result of business-change initiatives does not cause permanent and fatal damage or disruption to existing structures in the organisation (Kippenberger 2000). Below is an overview of the various reasons cited and each change initiative's score card.

4.1.3 Reasons for implementing mentioned change types

The main purpose for asking for the basic reasons why respondents' organisations implemented particular change initiatives is to deduce whether stated organisations' intentions for undergoing organisational changes do have any relation and implication for the outcome of the type of change initiative adopted. Broadly, respondents' replies are categorised into four groups (as shown in Table 20). They are:

- "We had no choice but to undergo the change" (Int.1)

Approximately, thirty percent of the respondents' organisations were so to say forced to making these changes. A sizeable proportion of this group (- in actual fact, five of seventeen) implied that their organisations' decisions to embark on stated organisational changes were chiefly borne in response to the dictates of their

business environments, especially due to “the high level of uncertainty that exists in the Nigerian business climate” (Int.12) or owing to “the effects of the aftermath of the global recession” (Int.1; Int.21 and Int.6). In Int.1’s words, “... before the recession, we happened to experience a great level of about 400% returns but in the past 10-12 months, it’s been so difficult for organisations especially those of us in the stock broking industry. We have had to cut down on staff strength from about 158 to about 86 just for us to operate at the best possible level”.

Corroborating how recession has influenced his organisation’s resolve to introduce Lean measures into how they do business, Int.6 said: “the recession has spiralled into a series of negative consequences. The banks are no longer giving firms loans. As such, we are fast running short of funds with which we operate, and worse still all those that owe us are all claiming they cannot pay up because they too rely greatly on loans from banks. In the books, we are rich but in actual fact we are slowly becoming insolvent. Regrettably, we had to lay off since employees’ salaries take up the chunk of our recurrent expenditure”. In an attempt to support his organisation’s decision to lay off staff, Int.6 went on to say his “organisation had to come out of the present economic crisis by doing a cost-benefit analysis for each of our critical operations; after which we could not do any better than to dismiss employees... (Int.6). One respondent whose organisation also had to cut staff numbers attested that it was not the best option. According to him, “though the only option that seemed most viable was to terminate employees’ appointment, we lost good hands and this has slowed things down a lot (Int.21)”.

In summary, the more an organisation’s management become unsure and restricted in how the organisation operates, the more the “management trims down services and focuses on the organisation’s core competence” (Int.13). Referring to how uncertainty has necessitated their organisations to regulate and re-orientate, Int.3 submitted that “things were increasingly becoming too difficult to predict”. Because of this, one of the respondent’s organisation had to develop capacities needed to “to be more proactive” (Int.4), but respondents that work in government-owned organisations indicated that this was often possible considering the “undue external

influence” (Int.15) from controlling bodies of examined organisations (Int.2; Int.4; Int.5; Int.8; Int.9; Int.12 and Int.20).

While Int.5, Int.8, Int.12 and Int.15 mentioned the external controlling body (which in this case is the Nigerian government at both federal and state levels) masterminded the need for their change initiatives, others cited that the organisational change “was in line with the organisation’s global strategy” (Int.4) and as such “is being carried out in all the organisation’s subsidiaries (Int.2, Int.3 and Int.9)” or “in countries that the organisation has presence in (Int.20)”. The last two respondents in this category (that is, Int.9 and Int.17) specifically stated that they were compelled to implement their observed change types as a direct reaction to policy alterations by the company’s management.

- “We saw it work effectively in another company, so we decided to do the same” (Int. 10)

In what appears to be a minority case; in three instances, respondents spotted the opportunity to improve on their business capabilities by observing it in other organisations. One respondent, pondering on why his organisation implemented his described change, gave an eye-opening account – “At a point, we had more sales than any of our competitors.... The sharp decline in our sales figure was later found to be as a result of how we handled our quality presentations to our customers. Despite the fact that our product range was noticeably of similar quality level, if not more, than most of competitors... In organisation A*, they had SON and ISO accreditations broadly printed in their products catalogue while we did not... Thereafter, the management too decided to undergo the same quality assurance endorsements” (Int.17).

In another instance, it was said that: “the organisation endorsed corporate governance because other similar financial institutions claimed they were better as a result... Moreover, foreign investors are more willing to work with organisations that practice corporate governance and also have some sort of internationally recognised credit/financial ratings” (Int.1). Still in support of these arguments, Int. 10 recalled that his organisation: “... was having problems managing information data... It took

longer to pull needed information from the system... However, other companies that bid alongside us for the same projects had this particular resource planning system they used. So seeing that it worked effectively in another company, we decided to do the same...”

- “We realised its potentials... and thereafter implemented it” (Int.13)

It was clear that twelve of the respondents’ organisations (that is, those of Int.1; Int.2; Int.3; Int.4; Int.5; Int.8; Int.9; Int.12; Int. 13; Int.17; Int.19; Int.20) had fore-knowledge about the type of change initiative they implemented, or are implementing or plan to implement. One respondent observed that his organisation even “has a department dedicated and mandated to ensuring successful implementation of Lean methodologies in all of its subsidiaries” (Int.4). One possible connotation of this is that those respondents that “recognized the potentials of their implemented change initiative” (Int.13) were able to do so because it had “slowly crept on to becoming part of the organisation’s goals and/or principles” (Int.9). For instance, one respondent commented that “... since upholding effective quality, and seamless customer interfacing and management, is actually one of the declarations in the organisation’s mission statements... the implementation was more or less an avowal and in total resemblance to what the organisation stands for and likewise is noted for” (Int.8).

Other interviewees remarked that:

“... before the actual project implementation, we were able to get the cost of the project and the firm was sufficiently liquid to carry it out” (Int.13).

“... the organisation had enough justifications for carrying out the implementations...” (Int.1).

“the project was seen as a continuation of managements’ effort...” (Int.20)

“... the management did weigh all other options that could produce the same outcomes desired and eventually concluded on this.... We considered the cost benefits – both short term and long-term ...” (Int.19)

“... the ERP system would also be to the firm’s advantage because the firm’s management information system would be simplified..”. (Int.3)

While discussing his organisation's knowledge and rationale for implementing his talked about change initiatives, Int.3 stated that "the business demands at that time necessitated the implementation of cost-saving measures" (Int. 3). As such, Int.12 considered that "identifying the benefits of any type of change... coupled with being able to expressly identify its needs in the organisation... makes it easier to convince stakeholders. Also, the choice of what type of solution to adopt becomes easier to come about... In addition, a little background research will not do any harm... All these unarguably build the organisation's confidence.... as it was in our case".

The remaining two respondents claimed that "... seeing the benefits that the previous attempts at improving quality had on the growth of the company... it was a lot easier to convince management to buy into it" (Int.17). "There was sufficient planning done prelude to the implementation ... and all the benefits and limitations were thoroughly reviewed... in the end, it turned out as it was supposed to" (Int.2). From these statements, one could deduce that those that saw it as "an added advantage" (Int. 4) to build up their "operational capabilities" (Int. 9) did very good preliminary analysis and satisfactory studies on the type of change initiatives they implemented.

This set of individuals expended time on the planning and implementation phases than the operational stage because as one respondent indicated that his organisation "... reviewed every aspect that could pose a challenge and subsequently devised plans to tackle any of these identified problems should it be so (Int. 20)'. In conclusion, surprisingly, half of the total respondents (Int.2; Int.3; Int.4; Int.9; Int.19) expressed that their organisations did ample evaluations before implementing these preferred initiatives work in multinationals. Based on this, there could be a possible relationship between organisations that prepare adequately before undergoing organisation-wide changes in Nigeria and such organisations being multinationals.

- Others (e.g. upgrade; rectifications, replacements and so on)

Seventeen of the respondents, under this category, had exclusively implemented their described change efforts in the past. As such, they were either doing upgrades

(Int.1; Int.4; Int.8; Int.13; Int.15; Int.17; Int.19; Int.21), rectifying/ tailoring to fit intended use (Int.3; Int.5; Int.9; Int.11; Int.12; Int.14; Int.18) or totally phasing out their earlier installed ones with entirely new systems/modules (as the case was for Int.1 and Int.10). One unifying theme noted amongst these respondents is that they all "... engaged external consultants to help pilot through..." (Int.13). As regards, the respondents were asked of what benefits the consultants were to them and some advised that:

"Good consultants definitely increase the chances of it being done well"
(Int.13)

"... the use of consultants makes it cheap... we don't have to go all out to acquire all the expertise and skill that they bring along" (Int.17)

"... close affiliation with, better put – continued engagement of, consultants could be highly beneficial... throughout this process" (Int.3)

"...they make the whole process well-situated and more interesting to follow through..." (Int.19)

However, a fraction of the respondents pensively assessed the role of their engaged consultants. Int.2 pointed out that "...it can at the same be the bane... The problem is that they are more inclined to making money than actually helping out" (Int.2). Int. 8 also expressed caution by saying that "consultants will only help to achieve the short term objectives... to maintain long term success... over-reliance hampers an organisation's ability to fully develop its in-house problem solving proficient... needed".

Similarly, in two other illustrations, interviewees responded that:

"the pace of implementation was observed to be less than desired..." (Int.11)

"the consultants deliberately slowed down the pace of the implementation... In the long run, we not only exceeded the set deadline for completion but also overspent as we continued to pay them" (Int.14).

Thus, in view of this, a respondent contended that "consultants hound necessary information and were less willing to transfer their skills to our staff" (Int.12.). In one instance "they were less forthcoming to help us when it became obvious that we

were about to dump them... the handing over of the project to the new consultants was done shabbily... we still require them to sign off some stuff to us that needs getting done but they have been messing about with us” (Int.1).

Table 20: Common reasons for implementing described organisational changes

Reasons for implementing described organisational changes	Total
We had no choice but to undergo the change	17
I believe it is because we saw it work effectively in another company; so we decided to do same.	3
We realised its potentials and saw opportunities to improve on business capacities and thereafter implemented it.	14
Others (e.g. upgrade; rectifications, replacements and so on)	23

4.1.4 How successful were these change attempts described?

The main reason for this is to investigate the success rate of these implementations. If the implementations were found to be highly successful, a thorough study of the tactics employed by successful firms was made and compared with those tactics employed by unsuccessful firms. This enabled the researcher to understand the major differences of both tactics. Likewise, if they were not successful – it would be appropriate to know what point they faltered and what caused it. In an attempt to decipher how each of the discussed organisational changes met preconceived expectations, the researcher sought to know in what phase these expectations were met (see Table 21). That is, whether it was at the formulation and implementation stages (which will thereafter be referred to as the initial stages) or if it was at the later stages which signify any other stages after which the change has become operational.

In consideration, thirty nine of the fifty seven change initiatives talked over were agreed to have met their intended expectations at the initial stages against seventeen that were accounted to have failed (at the initial stage). One respondent (Int.12) said his organisation’s management was unsure as per what to tell of his organisation’s attempt to improve on their quality management systems. At the initial stages, they (i.e. Int. 12’s organisation) continued to hope they could “rectify and make amends to observed irregularities” (Int.12). And as the change went on, “the management was irresolute” (Int.12) but afterwards they realised that ‘it was not meeting our thought anticipations and it would never do so” (Int.12). This attempt was finally put under the categorisation of change initiatives that failed at a later stage. In the end, thirty six of the discussed change attempts were tagged under the set of those that did meet pre-stated expectations while twenty one of the attempted changes flunked. In conclusion, approximately sixty three percent of the change attempts were considered to be successful.

Table 21: Degree to which preconceived were met and what point they were met

		Were pre-conceived expectations met?	
		Yes	No
At what point?	Initially	39	17
	Later	36	21

A breakdown of these change initiatives show that as regards:

- i. With regards to changes to management and organisational structure, one attempt (told by Int.5) “failed right from the onset” and said to be a “total

departure from what was expected". The implication of this for change agents is that "you cannot have a false start... still not realise the misconceptions you have created or that have been created... and ultimately await good results" (Int.5). The other example, of this change type, contributed by Int.12 was "a success even before it started... each employee knew about it and was ready for it". And in the end, "it passed off as everyone had imagined".

- ii. Lean thinking/ philosophy and/or implementation: Fifteen respondents (Int.1; Int.2; Int.3; Int.6; Int.7; Int.8; Int.9; Int.12; Int. 13; Int.15; Int.16; Int.17; Int.18; Int.19; Int.20) signified that their attempts met their expectations while six others (Int.4; Int.5; Int.11; Int.10; Int.14; Int.21) opined otherwise. Of the fifteen respondents that talked about their efforts, three (that is, those talked about by Int.12; Int.16 and Int.18) were initially imagined not to have played out as hoped for but were worked upon till each eventually turned out alright. To sum this, approximately seventy one percent were successful and twenty nine percent of the total change initiatives discussed were not.
- iii. In relation to ERP systems, ten respondents (Int.1Int.3; Int.4; Int.6; Int.7; Int.8; Int.9; Int.10; Int.12; Int.13; Int.18; Int.20) reported that at the beginning stages, their endeavours were as they proposed, while four respondents (Int.1; Int.2; Int.4; Int.15) stated categorically that their undertakings were abortive right from the offset stages. However, three of the respondents (i.e. Int.6; Int.10 and Int.18) who had earlier stated that their attempts were successful said it was not when it became fully operational. Int.1's desire to implement SAP was not successful until the consultants were changed. In summary, fifty percent of those who had something to say about ERP systems were successful, while the other fifty percent were not.
- iv. With regards to Customer Relationship Management, eight instances mentioned by Int.7; Int.8; Int.11; Int.12; Int.13; Int.14; Int.16; Int.17; int.20 and Int.21 were believed to be doing well at the initial stages and the other two

described were described as being “ineffective” (Int.20) and “dysfunctional” (Int.17). Afterwards, that is at the later stages, Int.16 and Int.21 disclosed that their attempt eventually went off point. In the end, six of the examples cited were considered successful and four were not.

- v. With regards to Quality Management Systems (which include, but are not limited to, certification/ accreditations, use of Pareto charts and so on), seven of the respondents quoted earlier asserted that their efforts were working out “as contrived” (Int.17) or as “conceived” (Int.13) while three respondents (Int.1; Int.12 and Int. 16) spoke poorly of their change endeavours.

4.1.5 Relating change initiatives’ outcome with implementation reasons

- a) What percentage of the total failures represents each of the observed reasons for implementing the described organisational change?

From the results presented in Table 22, the following analyses were deduced:

- i. A total of twelve of the seventeen respondents’ organisations that implied that they had no choice but to undergo the discussed change initiative, failed to meet their preconceived expectations; thus representing seven one percent of all the failure cases.
- ii. Of the three respondents that said that their organisations saw ‘it’ work effectively in another company and thereafter decided to do the same, one was found to have failed while the other two were accounted for as being successful. One limitation that would prevent further analysis on this category is that the sample size considered could be labelled as being too small for generalisation (Fraenkel and Wallen 1996; Maya Bar-Hillel 1979). Hence, analysis on this classification is viewed to be inconclusive.

- iii. Roughly, twenty one percent of those who expressed that they realised its potential and saw it as opportunities to improve on their business capabilities, failed in their desire to implement such changes. Hence, making it approximately fourteen percent of all total cases of failure.
- iv. Five cases out of the twenty three discussed change initiatives classified as 'others' failed. In other words, this set of change initiatives failed to meet its preconceived expectations. This represents approximately twenty three percent of all the total failures of all the discussed change initiatives. .

Table 22: Relating failure cases with reasons for implementing the changes

Reasons for implementing described organisational changes	Total	No. of Failed cases	% of failure
We had no choice but to undergo the change	17	12	≈71%
I believe it is because we saw it work effectively in another company; so we decided to do same.	3	1	≈ 33%
We realised its potentials and saw opportunities to improve on business capacities and thereafter implemented it.	14	3	≈ 21%
Others (e.g. upgrade; rectifications, replacements and so on)	23	5	≈ 22%

b) What is the effect of reported failure cases on the organisation?

After close scrutiny and thorough examination of responses, three main effects were conceptualised. The first is “little or no effect on the organisation” (Int.17). This characterises situations wherein the failure of the organisational change described caused infinitesimal disruptions in how the organisations operate in the broader context of the change’s intended use; and as such the organisation recovered from any disruption that it might have induced within 0 to 6 months from the date the

failure was officially recognised. The second, “considerable effect on the organisation” (Int.6), typifies examples of described change failures that resulted in “minor interruptions” (Int. 15) in how the organisations operate in the broader context of the change’s intended use; and as such the organisation recovered from any disruption that may have occurred in the past 6 months but not later than 1½ years from the date the failure was officially recognised.

Finally, “fatal consequences on the organisation” (Int.5) represents organisational changes that greatly affected how the organisation and in which case took the organisation more time to fully recover from the change – in most cases, more than 1½ years from the date the failure was officially recognised. In this last group, provisions were made for any change effort that the interviewee identified as a failure but the management is yet to call as such (as it was in the case of Int.5).

Table 23 shows that.

- i. Seven of the indicated examples which were assumed to be unsuccessful were said to have “little or no effect on the organisation” (Int.17). Three of these seven cases mentioned were part of the noted cases wherein organisations did ample checks before implementing them – that is, realised their potentials and saw opportunities to improve on business capacities before implementing them while the remaining four were among those marked under ‘others’. Furthermore two of these (i.e. those deliberated upon by Int.4 and Int.21) were attempts to implement lean thinking/philosophy, three (cited by Int.17; int.20 and Int.21) were customer relationship management endeavours and the last two (referred to by Int.1 and Int.12) were done under the class of (total) quality management
- ii. Ten of remarked instances by respondents caused “minor interruptions” (Int. 15) and as such had “considerable effect on the organisation” (Int.6) – in other words, these failures created noticeable effect on the organisation. Nine of the cases covered were those grouped under the “we had no choice...” category, while the last of this subset was grouped under the “... saw it work effectively in another company...” category. In addition, five ERP cases (mentioned by

Int.2; Int.4; Int.8; Int.10 and Int.15), one customer relationship management example (told by Int.6), one quality improvement initiative (brought up by Int.16) and three Lean thinking/philosophy instances (pointed out by Int.5; Int.11 and Int.14) all make up these ten instances whereby their failures caused minor interruptions and as such had little effect on the organisation.

- iii. Four certified that the failure had “fatal consequences on the organisation” (Int.5). Three of this group had no choice but to undergo the change while the last saw it work elsewhere. Further analysis shows that one of the these failures was as a result of undue and sudden changes to the management and organisational structure (Int.5), while Int.6 and Int.18’s accounts of their resource planning implementations made up two of the remaining changes implemented considered to be fatal. The last change initiative identified is that of Int.10’s Lean thinking/philosophy execution.

Table 23: Effects of the identified failures on the organisations

Effect of the identified failure on the organisations	No.
Had little or no effect	7
Resulted in noticeable disruptions	10
It had fatal consequences/ it caused major interruptions	4

- c) How did those changes which were ascribed as having pre-expectations impact on organisational performance?

The identified change types that were certified by respondents to have met their expectations were benchmarked against three after effects. The first after effect was

that the organisation's performance improved because of the change initiative implemented. The second was that the change initiative had no effect on the organisation's performance. The third and final after effect was that the change initiative affected the organisation adversely and as such the organisation's performance fell. Just three change initiatives were put under the third group by the researcher. An example of the three changes was in relation to changes to management and organisational structure. Though the change was initially successful, because "there had been too much of such changes..." (Int.5) it was fast "becoming counterproductive" (Int.5). Using these three described after effects, all the remaining thirty six change initiatives in which respondents did not mention that it failed, were analysed. Thirty-four change initiatives were clearly stated as being successful by respondents while two change initiatives could not be assessed. According to Int.16, "it was too soon to evaluate" (Int.16). A breakdown of the analysis can be found in Table 24

Table 24: After effects of 'successful change' on organisational performance

After effects of 'successful change' on organisational performance		Count
1. The organisation's performance improved because of the change initiative implemented		26
Changes to management and organisational structure	1	
Lean thinking/philosophy and implementation	9	
Enterprise Resource System Planning (e.g. SAP)	5	
Customer Relationship Management	6	
Quality Management Systems	5	
2. The organisation's impressed performance neither improved nor declined		5
Lean thinking/philosophy and implementation	4	
Quality Management System	1	
3. Though it was successful, the organisation performance suffered a loss		3
Changes to management and organisational structure	1	
Enterprise Resource Planning (e.g. SAP)	1	
Quality Management System	1	

d) Proportion of failures grouped on the basis of the extent of uncertainty in business domains and the complexity of the described organisational change effort.

i. Extent of uncertainty in business domains:

In this study, it is taken that organisational changes are often deployed in business domains that are rapidly changing thus causing great uncertainty. Uncertainty refers to business circumstances in which the amount of information needed is greater than the information available (Galbraith 1973). Therefore, an understanding of the extent of uncertainty in business domains “encapsulate both the big picture and little picture elements and it can be applied to both the present and the future” (Thompson and Martin 2005, pg 58). As such, in this study, a business domain with low uncertainty is defined as a business domain in which the next cause of actions and responses can be anticipated and reasoned backwards (Brandenburger et al. 1995), while a business domain with high uncertainty is defined otherwise. Reasoning backwards from desirable standpoints can be done by sequentially highlighting series of anticipated pre-requisites of best possible options (Brandenburger et al. 1995).

ii. Complexity of described organisational changes

A complex business-change initiative is normally a lengthy and costly venture that will most likely have significant impact (for example, cultural changes) on an organisation’s size, existing processes, units and/or systems. It is a change that will possibly require constant or continuous engagement of external help that could provide for the acquisition of additional knowledge, competence and skill needed to implement and manage the change initiative. Hence, complexity of change initiatives is a function of risk (Hamel and Valikangas 2003). In line with this, in this study, a highly complex organisational change was defined as one which the elements and drivers of such change can easily be predicted and accounted for. A low complex change, represents a change

which the elements and drivers of such change cannot be easily be predicted and accounted for.

Based on the above working definitions for both “evaluating the extent of uncertainty that exists in any given business domain” and “the complexity of described changes when organisations are undergoing changes”, each of the failure cases observed by respondents was grouped accordingly. A summary is presented in Table 25 and Table 26. Lastly, an outline of the regions wherein these failures occur and the number of failures experienced in each of the regions is presented in Figure 18.

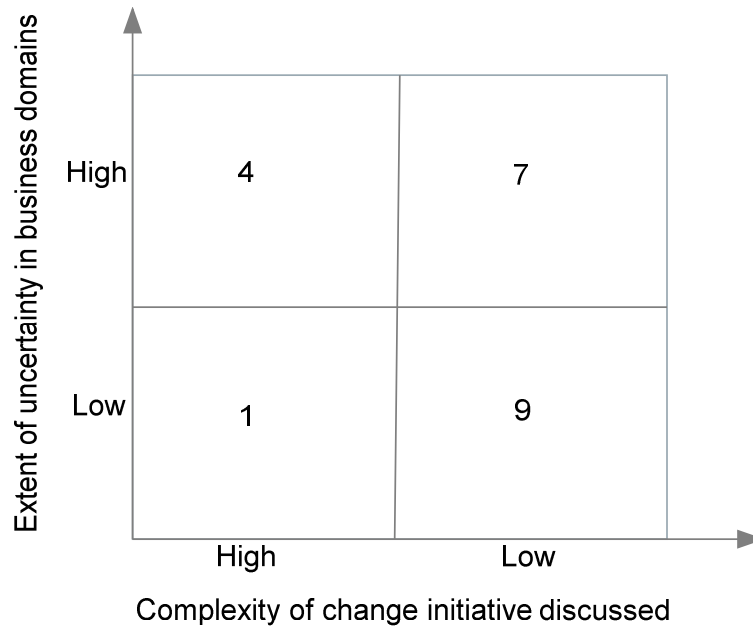
Table 25: Failure cases (i.e. extent of uncertainty in business domains)

Extent of uncertainty in business domains	No of failures that fall under this group
High level of uncertainty in business domain	11
Low level of uncertainty in business domain	10

Table 26: Failure cases (i.e. complexity of implemented change described)

Extent of complexity in business domains	No of failures that fall under this group
High level of uncertainty in business domain	5
Low level of uncertainty in business domain	16

Figure 18: Regions in which the described failure cases were noted



4.2 Profile of failures (and an outline of their causes)

4.2.1 Changes to management and organisational structure

Int.5's organisation is a state government-owned university that was established in the early 1980's. Int.5 has worked in this university for almost seventeen years. Over this period of time, he has been appointed Head of Department (HOD) twice and once as Faculty Dean. All his promotions, except the last one (which has got him elevated to the post of Vice Chancellor), have really been in accordance with laid down rules and regulations. He explained that "initially, all promotions were based on seniority and performance-centred", but now, he accuses the governing council and those in charge of nepotism. In his exact words – "sadly, new executives are rarely picked on merit but rather mostly on perceived personal relationships...". The Vice Chancellor further reiterated that "more annoying... is the fact that these reconstitutions are extremely unnecessary... The past executives were doing quite well..." The only problem was that a select few felt they were becoming too influential and were making things harder for them.... So, "in order to douse tensions and to

make the exercise seem as if it was done in good faith, myself and two others were included as part of the new team”. Explaining the circumstances that led to the present change in management, the Vice Chancellor hinted that based “on a number of allegations from an unknown group and after a ‘kangaroo’ visiting panel was instituted... the governor alleged that the past executives had misappropriated funds... so they were all relieved. The irony of it all is that this is the third time... over the past thirteen years”.

Identified failure nodes of this type of delineated change are:

- i. Staff’s ‘silent’ resentment: Due to the repeated changes in management team and employees’ perceived annoyance, a lot of people “silently work to scuttle almost all the efforts... the new management is making... Though this is expected...”. What this means is that the staff no longer have the zeal “to carry things through... they have been down this path again and again... all to no avail”. Of more concern is that the staff including this new team “has lost absolute confidence in the whole system... Most are less bothered... they care less. Some of us who show concern are being repeatedly frustrated... you start wondering whether it would not be better to leave while you can... At meetings you are quickly reminded not to embark on any long-term goals... as it is seen as a mere waste of resources and (personal) time. No one is doing his/her best to change things or at least make things better... they will rather maintain status quo as long as it works and even if it does not – as long as the bulk of the reasons... cannot be traced to their direct reports”. But it was never like this. “Then... you could be rest assured of everyone’s total commitment... they worked tirelessly to ensure that things were rightly done... even if it entailed personal sacrifices... not the eye-service people do now”.
- ii. Endless discontinuance of existing policies: Schneider et al. (1996) statements best illustrate this: when “a company introduces changes with high expectations of improving performance. When the changes fail to take root and produce intended results, the unfulfilled hopes lead management to introduce other seemingly promising changes. These, too, ultimately fail. The sequence repeats- an unending cycle of high expectations followed by failure

and, inevitably leads to frustration on the part of management and cynicism on the part of workers”. But in this case considered, the changes did not fail. They were discontinued each time a new group of individuals took charge of the helm of affairs at Int.5’s university.

According to Int.5, organisational leaders “hardly followed up on their predecessors’ policies... as it seems everyone wants to outperform the other... even if it means denying good schemes... The effects are so glaring... staff take managements’ efforts less seriously. Majority of our well renowned staff have left..... the standard is fast declining... In the late 90s, the university vied very well alongside a few federal institutions that had been in existence for a longer time... To many outsiders’ surprise, NUC even rated the medical school as first one particular year. Now, I doubt if we are even among the top fifteen...”. However in contrary to what they make staff believe, “the issue is not about poor policies... except in very rare cases”. He followed this up by stating that, alas, “policies are abandoned at their nurturing phases... and mostly also at their prime... not because they are otiose. Instead of people seeing things from a collaborative perspective, they compete... I perceive that... because they think if they continue with these policies and they succeed, staff might indirectly attribute the success and rewards to their predecessors”.

- iii. Overbearing external influence: Though, this perspective was also corroborated by Int.2, Int.4; Int.8, Int.9, Int.12, Int.15 and Int.20; the difference to that of Int.5 is that the intents of the controlling bodies are totally subjective and biased. Int.5 comments are as follows: “the governing council has been partisan... The other thing is that stakeholders’ opinions are rarely sought... they think of a project and they send out memos suggesting when and how the management team should implement their directives... their stance is more or else final as no one can argue against it... and if you do, you are branded as a disloyal person and possibly accused of insubordination”.

4.2.2 Lean thinking/philosophy and implementation

The failures recognised under this heading are evaluated along the dimensions that Lean thinking is really about two pillars. That is: (a) the concept and practice of continuous improvement and (b) the power of respect for the people (Simpler and Koenigsaecker 2009).

- The concept and practice of continuous improvement:

Under this sub topic, six failure pitfalls are imminent and should be avoided. These are:

- i. Misconception of what Lean thinking/philosophy and implementation are all about: Firstly, most of those that failed (and majority of those that succeeded) in their attempt to implement 'Lean' do not understand what the concept or ideology is built upon. Lean is a process that, when deployed appropriately, will enable an organisation to sufficiently recognise aspects of their operations and/or processes that pose potential setbacks. It lightens up the processes and as such operational errors are quickly addressed. Though the concepts and/or examples discussed by respondents were intended to achieve similar feats, the only difference was that some respondents (Int.1, Int.6, Int.9 and Int.21) actually do not realise that it is a constant, never-ending sometimes repetitive process. Another problem noticed is that respondents (Int.8, Int.11 and Int.14) slackly feel that once an aspect of the organisation is so to say made lean, the other divisions automatically sync along and in the end, the organisation attains a lean status. Lastly, because respondents fail to take lean as a constant never-ending sometimes repetitive process, some of the respondents' (especially that of Int.10, int.18 and Int.19) reckon "managements were" and "declared it as a failure too soon" (Int.4).
- ii. The issue of management complacency after initial success: the main cause of this is that most of the respondents' management have little or no understanding of the change being implemented (Int.2, Int.3, and Int.19). In most instances, it was a case of the change being sold to the management as a need that really does not exist or does not actually fall

under the organisation's immediate priority instead of the management discovering it as a potential to solve a looming need (as it was for Int.7; Int.12 and Int.17); although a handful of respondents as earlier reported claimed they realised its opportunities to benefit the organisation. The implication of this is simple: organisations do not quickly recognise that the change programs are not working. Thereby, most times management are comforted with initial success because "further enquiries or discontent might reveal their incompetence and level of know-how" (Int.4). In brief, "fresh thinking that led to a company's initial success is often replaced by a rigid devotion to the status quo" (Sull 1999).

- iii. Quality should supersede quantity: Unfortunately, a significant number of respondents (for example, Int. 3; Int.12; int.17) indirectly agree that quantity might end up paying off when posed with the challenge of trading it off rather than ensuring quality. For example, two respondent's (i.e. Int.6 and Int.21) management knew quite well that if they lay off some of their staff, their ability to maintain their current level of remarkable service would drop to a large extent but they still went on with it. This leads to the fourth pitfall which should be avoided.
- iv. It should not all be only measured in terms of immediate financial gains at all times: success should be taken as a dynamic construct that takes time to master and perfect. Understandably, organisations are in existence to make financial gains (Goldratt and Cox 1989). This should, however, not cloud management's ability to distinguish between operations that will lead to short term financial benefits from those that will result in long-term financial benefits. Organisations must realise that the accumulation of short-term goals will eventually result in the accomplishment of predetermined long term goals. Most respondents' management do not act this out; rather they are preoccupied with achieving long-term goals without proper preparations and most importantly without a clear understanding of how short term goals can be in the long run be beneficial. This was evident when Int. 15 talked about the respondent's

organisation's attempt to implement their ERP system. Not until when the organisation decided to highlight their implementation issues according to functions of the organisation's divisions, did they start making actual progress.

- v. Admit that a problem truly exists: one common idea that is established from a lot of the respondents is that their respective managements did truly admit that there was a problem. Whether the problem was founded falsely is another subject. One apparent dilemma deduced from respondents' answers is how organisations can correctly coordinate their problem identification and solving methods with how to assess and match their needs objectively without prejudice. Int.12's and Int.18's accounts of once declared unsuccessful lean implementation effort was turned around and became a success (refer to section 4.1.4, bullet point i) suggest that organisations that have in-existence a formal and dedicated channel through which problems are confirmed and rectified are better positioned to successfully implement organisation-wide changes. Although, Int. 12's account (in section 4.1.4) is in relation to the implementation of quality management systems, it also offers a good example of how the adoption of adoption self-denial stance affect organisation's chances of successfully implementing organisation-wide changes.

- vi. Senior and middle managements' disposition to the change: leadership styles and behaviours have been widely established to be a key factor for successful implementation of organisational changes; including Lean. Respondents' statements also confirmed this. An interesting feedback from one respondent (Int.9) is that managements' leadership should be further sorted into senior and middle management; and middle managements' role and significance in the change program should be given more prominence than before.

- The power of respect for the people.
 - i. Implementing Lean is not a unitary approach, rather it involves a participative management and approach: The cases reveal that most of the respondents' managements took the improvement (or downsizing exercise as it was in most cases) as a unitary approach (Int.13; Int.17, Int.20). Those that had knowledge of "the process... and what format it would take will seemingly hoard such knowledge" (Int.1). Because of this, the change process will suffer moderate to high knock backs should the persons in charge ever leave (Int.3, Int.4, Int.12, Int.17; Int.20). In another instance, crucial stakeholders are hardly involved in the whole process as "it was shrouded in utmost secrecy" (Int.16). Kelada (1996) puts a figure to it; in the author's words: "50 – 80% of business re-engineering fail because of non-commitment of staff and mostly because management fail to involve the core – doers – of these improvement schemes". In some of the cases discussed, this led to a lot of speculation, and eventually employees formed wrong perceptions (as it was with the examples cited by Int.5, Int.7, and Int.10).
 - ii. Wrong perceptions: perception is principally a state of awareness; in that it depicts how things are sensed, imagined and interpreted. As such, perceptions are founded on established or on abstract facts. That is to say, perceptions can either be qualitatively or quantitatively founded (Kable 1983). Based on respondents' responses, perceptions which are based on abstract facts (for instance, hear-say – which in this study relates to perceptions formed from third party interpretations) conveniently and apparently constitute employees' resistance and ultimate silent resentment in organisations (as discussed earlier). While a good number of the interviewees recognise that "every experienced manager would expect some level of resistance from employees" (Int.1), a larger number admit that employees' resistance need not happen at all if change is done and therefore should be avoided mainly because it "slows down things" (Int.4). Ichikawa (1990) summarise how perception can be correctly

managed as follows: “If I know somebody is misunderstanding what I am to say, it is possible to repair the relationship. But if I don’t know that somebody has misunderstood, it is difficult to repair the relationship”.

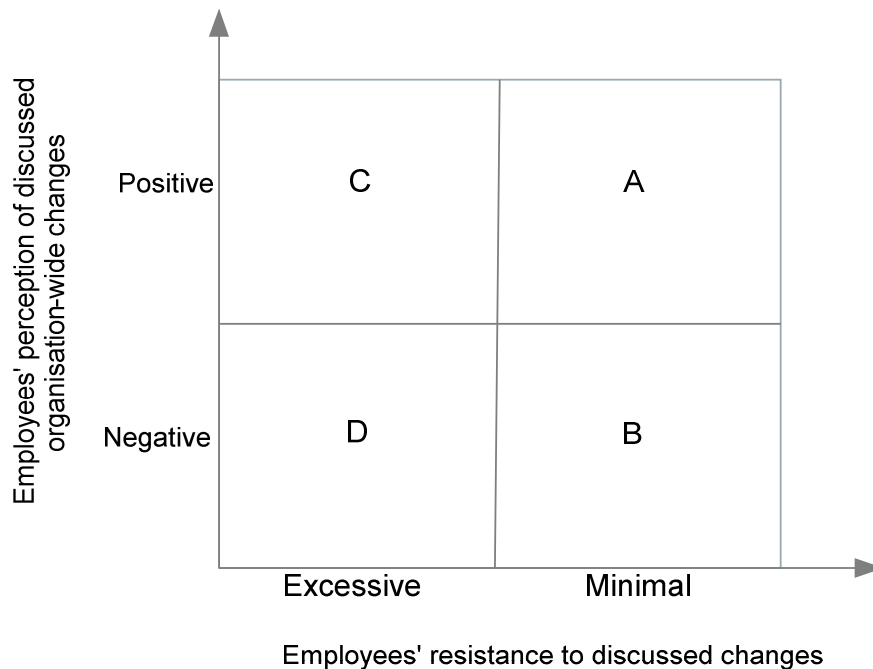
In relation to this line of thinking, Vieitez et al. (2001a) stated that if perception can be managed convincingly, half of the resistance or drive to sustain Lean would be greatly reduced. In Figure 19, four grids illustrating how employees’ resistance in relation to the discussed organisation-wide changes relates to negative or positive employees’ perceptions of described changes are presented. Appropriately put and as shown in grid B, when respondents’ concluded that their employees’ resistance was considerably minimal despite their high negative perceptions about the change, they also stated that this was because they (as in management): (a) had a clear vision about the change discussed and the set goals were adequately communicated to all and sundry (Int.1, Int.2, Int.3, Int12; Int.18; Int.19); (b) had made available a robust compensation package for those that would be affected in the exercise (Int.1 Int.6); and (c) most importantly the “employees discerned that the change was initiated to serve common interest” (Int. 8) and the “majority of them would benefit doubtlessly from it” (Int.13).

In another broadly grouped setting (grid A), under which the majority of the respondents that claimed their change initiatives met their preconceived expectations, the reasons why employees’ perception of the change was positive and why correspondingly employees perceived resistance to the change was small or non-existent was based mostly on the facts that: (a) the intended change had “little or no grave consequences that poses immediate threat to the staff” (Int.8). This opinion was also shared by Int.20; (b) the employees’ had developed some good level of trust in management over time and “the organisation is not in any way in financial distress” (Int.13); (c) the employees were confident that both senior and middle managements “have what it takes to make the change happen” (Int.12); (d) “employees’ affective commitment to such change” (Int.20)

and (e) “the management has a good past record of success for implementing similar change” (Int.3).

In the third instance (that is, grid D), staff would often greatly resist changes when they have negative perceptions about the change as a result of: (a) high ambiguity (that is, uncertainty) about what the change is all about – that is, why the change is being done, what it will achieve and how it will affect the staff (b) grave misunderstandings, failure to honour stipulated agreements and severed communication breakdowns (c) bad precedence which lowers individuals receptivity and readiness to support similar changes (as shown in the case described by Int.5 above); (d) conflict of interests due to irreconcilable terms and conditions among major stakeholders. Lastly, in grid C, employees’ might perceive the change positively, but still show unrestrained resistance: (a) out of fear and insecurity; and once they observe that: (b) management are duly unfair to them; (c) their working conditions are considered not conducive and (d) their basic rights and privileges are being exploited.

Figure 19: Employees’ resistance vs. perception of the discussed changes



- iii. Help them (i.e. staff) to go through each change implemented: According to Harper (2001), “for every change each presiding situation is unique and has its own peculiarities”. In accordance, a high percentage of the respondents acknowledged that their organisations have some form of “cushioning programme for their employees” (Int.8) that they deploy to help their employees get more acquainted to the discussed changes (Int.10; Int.15). Examples of such programs include, but are not limited to, training strategies, introduction of stress-coping measures, formulation of employee-friendly health plans, enrolment in fitness clubs and so on.

4.2.3 Enterprise Resource Planning Systems (e.g. SAP)

A few of the common reservations observed by the researcher by all the pilot study respondents in relation to implementation of ERP systems are summarised.

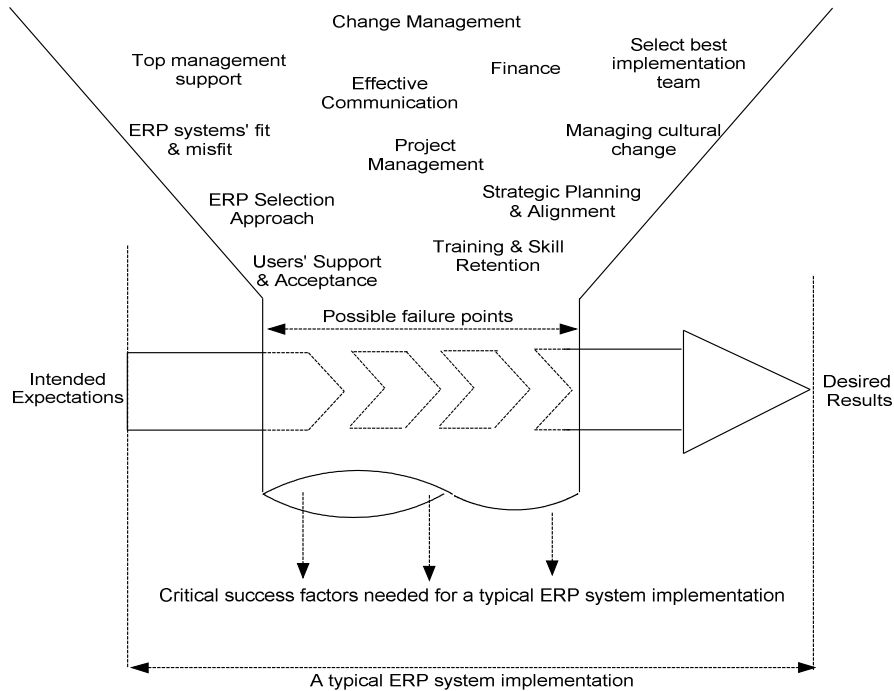
- i. Complexity of ERP systems: Five interviewees who discussed their implementations stated that it was quite complex (Int.1, Int.2, Int.3, Int.10, Int.13). A few of the respondents also affirmed that they “spent a lot to train the users... even at that they still had problems” (Int. 2). “It requires a lot of interfacing...” (Int.2); “the interface is not user-friendly at all...” (Int.15). For example, “the integration with Progenics was unmanageable... after all financial data have been posted and reports generated from SAP, we then export the figures into Excel” (Int.1).
- ii. Perceived usefulness of ERP systems: Just as Tennant and Wu (2005) reported in their study that ERP projects are generally perceived to be a concealment for downsizing, so did some interviewees, who explained that their staff, especially those from the finance-dominated industrial sector (Int.1, Int.2, Int.8, Int.18), actually thought it was done mainly to substitute for their jobs. Unfortunately, in two cases of ERP system implementations mentioned, employees did lose their jobs. Int.1 explains as follows: “it did make transactions more visible to everyone... our

managements reports were timely... However, one or two employees' appointments were terminated..."

- iii. Cost of implementing the system: Based on some of the responses of interviewees, the cost of implementation of ERP systems, especially SAP was way-off what they expected. Associated costs mentioned were relative. Some expenses were cited as relating to the direct engagement of consultants as making up a junk of the implementation cost (Int.4, Int.8, and Int.10). For some, it was the cost of hiring competent SAP professionals (Int.1, Int.2, Int.13, Int. 15, Int.17) while for another subgroup it was the cost of training staff (Int.7, Int.18, Int.20). Lastly, cost was related in terms of how much they spent to "...customise their resource planning systems... as additional support software had to be bought" (Int.12).
- iv. High turnover of IT staff: "Since there are only a few good SAP practitioners... the demand for them is high..." (Int.2). "A good number of SAP experts spend as little as 6 - 9 months in a company before leaving..." (Int.18). In instances when they are not leaving, "they hold the company to ransom by demanding unreasonable salaries" (Int.6). As a result, as one respondent explains: "... it is some sort of dilemma... you are not even encouraged to train your existing staff... it is all the same... they will leave as soon as they believe they have acquired the skill or when they get a better package elsewhere" (Int.2).
- v. Lack of consultants: "You have very few consultants... and from my experience merely 30% of them happen to be well-experienced in ERP project implementation... the remaining are still just coming up" (Int.1).

In Figure 20, the critical factors needed for successfully implementing ERP systems as observed during the course of this study are presented.

Figure 20: Critical success factors for a typical ERP implementation



4.2.4 Customer Relationship Management (CRM)

Two of the respondents who said their effort to implement CRM techniques failed attributed their failures to “inconsistent reviews and inability to do follow-ups” (Int.17), and “misalignment of focus on the part of the managers overseeing it” (Int.16). The reason why one of the CRM projects failed was mainly because of ethical obligations (that is, the CRM project that Int.20 discussed). Int.20’s organisation is an American organisation; and under American law all organisations are bound by the FCPA Act. The Act forbids an organisation from offering or taking bribes. Sadly, in their industry, “the more your organisation can grease the palms of government officials, the more contracts your organisation wins... when they realised we would not do that... we were branded... No matter the entreaties... we will never be taken seriously unless we do as others do”. Another reason why one of the cases reviewed (which was noted by Int.21) failed can be pinned on “employees’ reception and countenance

towards customers”. This was summarised as follows: “how our frontline employees treat customers... determines if they will do business with us again”.

4.2.5 Quality Management

Based on the three interviewees (i.e. Int.1, Int.12 and Int.16) who talked about how their quality management changes never met their preconceived expectations, three broad arguments are presented. These are:

- i. Establishing an implementation team/ steering committee/ audit team: In nearly all the cases discussed (that is, the 57 illustrations), respondents cited that their organisation’s management did set up an intervention team mandated to carry out their stated changes. This was however not the case, as noted in Int.17’s explanation reproduced: “At the beginning... only the line leaders were mandated to ensure quality... After a while... no one could really say whether they stopped doing it... but we realised it was being reported wrongly... we still had a number of goods thrown in the defect cartons but quality reports suggested otherwise... and so, we knew our effort... had failed... A team of six was formed...they are people who are independent of the actual production... everyday... they go down the lines... constantly but unannounced... to review and confirm what the line leader reports... then we saw the difference”.
- ii. Training (and development): Are increasingly becoming an important feature in organisational development, particularly in human resources development (Noe 2008). Virtually all the respondents also agreed with this. Some of the respondents prompted that “training becomes ineffective if it is directed at only a few selects” (Int.8). Hence, “it should be thrown open” (Int.7) and be “designed to include a good deal of the employees” (Int.20). After training, organisations must devise ways through which “trainings are translated into lessons learnt and tangible learning protocols for others” (Int.13). This can be “mostly achieved through collaborations” (Int.5)... and “knowledge sharing among colleagues” (Int.1). This is

beneficial in that when “trained employees leave, others can pick up” (Int.3)... “easily” (Int.1). This is in agreement with Smith (1998) which says that “learning is a systems-level phenomenon because it stays within the organisation”. In the case of discussed changes that failed to meet expectations as regards, the interviewee’s organisation “suffered great setbacks when the key personnel left...” (Int.6).

- iii. Eliminate areas where red tape exists: In Int.12’s example, bureaucracy prevented even middle managers from making small changes to high profile projects “not until it has been approved by their superiors... in some cases, the minister”. Regrettably, “approvals get delayed... sometimes for weeks...”. Subsequently, “coupled with other minor issues... it failed”. Ironically, Gore (1993 pg 11) thinks that not one inch of red tape created (in this case, by Nigerian government) appears by accident. Int.2 too stated as follows: “... these bottlenecks were invented to curb excessiveness of managers... but it now has a negative effect...”

4.3 Possible inferences from the pilot study results

4.3.1 Contrasting continuous and one-off organisation-wide changes

As mentioned earlier, Grundy (1993) illustrated that typical organisation changes can be in the form of smooth incremental change, bumpy incremental change, and discontinuous change. Thus, as indicated in the literature review, organisation-wide change types are thus illustrated based on amount of time an organisation expends on the change and its associating changes (Weick and Quinn 1999). Episodic/ discontinuous organisation-wide changes are usually short and as such are infrequent and intentional one-off changes that tend to occur in distinct periods (Weick and Quinn 1999) while continuous organisation-wide changes are never-ending and ongoing adjustments and adaptations (Nadler and Nadler 1997). In other words, a continuous organisation-wide change is a cyclical pattern of endless modifications in work processes (Weick and Quinn 1999).

Generally, a one-off organisation-wide change is carried out in reaction to external events, e.g. technological advancements or organisation crisis (By 2005; Weick and Quinn 1999) while a continuous change is primarily implemented as a result of an organisation's emergent self organising interactions and response repertoires to daily eventualities (Weick and Quinn 1999). In line with these above arguments, the twenty-one broad failure types of organisation-wide changes discussed by sixteen respondents were classified under discontinuous (or one-off) changes or continuous changes. The discussed organisation-wide change under changes to management and organisational structure and the seven failure cases discussed under ERP implementations were grouped as episodic or one-off organisation-wide changes while the remaining fourteen organisation-wide changes that were not successful were grouped under continuous organisation-wide changes. As shown in Table 27, 66.67% of the total failure cases were specific to continuous organisation-wide changes. Hence, there is ample evidence to state that continuous organisation-wide changes are more difficult to implement, manage and sustain (Balogun et al. 2004b; Brown and Eisenhardt 1997; Hazelrigg 2007; Moran and Brightman 2000; Porras and Robertson 1987; Weick and Quinn 1999).

Table 27: Contrasting continuous and one-off changes

Respondent who discussed the failure cases	The various types of failed organisation-wide changes discussed by pilot study respondents				
	One-off organisation-wide changes		Continuous organisation-wide changes		
	Changes to management & organisational structure	Enterprise Resource Planning Systems Implementation	Lean thinking/ philosophy & implementation	Customer Relationship Management-based Changes	(Total) Quality Management Systems-oriented programs
Int.2		x			
Int.9			x		
Int.20				x	
Int.1		x			
Int.1			x		
Int.1				x	
Int.5	x				
Int.8			x		
Int.13		x			
Int.15		x			
Int.16				x	
Int.16					x
Int.6			x		
Int.11			x		
Int.12					x
Int.14			x		
Int.17				x	
Int.18		x			
Int.21					x
Int.21			x		
Int.21		x			
Subtotal	1	6	7	4	3
Total	7		14		
Percentage	33.33%		66.67%		

4.3.2 Comparison among multinational, national and local organisations

As it was suggested earlier, the types of organisations which the interviewed persons work for were grouped under three broad classes, namely: multinational, local and national organisations. In this study, the basis of classification was centred primarily on the geographical location(s) of the organisations that the respondents work in (Kogut and Zander 1993; Markusen 1995) and the size of the organisations' workforce. In line with this, multinationals "are firms that engage in direct foreign investment, defined as investments in which the firm acquires a substantial controlling interest in a foreign firm or sets up a subsidiary in a foreign country" (Markusen 1995). Multinational organisations in this study are taken as organisations that have one or more subsidiaries or direct foreign interests in organisations that are in countries other than Nigeria. A national organisation is characterised as an organisation that has offices across Nigerian states – which means that the organisation has more than one operational office across Nigeria. Lastly, a local organisation is defined as an organisation that has one operational office – and in rare cases, might have more than one operational office or established presence in no more than two Nigerian states.

Thus, it is expected that multinational organisations would have a larger workforce than either a local or a national organisation while the local organisations would have the smallest number of employees. In total, six of the twenty-one respondents work in multinational organisations; nine respondents work in local organisations and the remaining six respondents work in national organisations. Of these, as shown in Table 28, three of the multinationals (that is, those of Int.2, Int.9 and Int.20) experienced failures in their implemented organisation-wide changes. Seven local organisations failed; Int.21 talked of three distinct organisation-wide changes that failed. Last of all, seven local organisations failed with their change attempts. In this case, Int.1's organisation failed in three failure cases and Int.16's organisation had two. In summary, only three failures were recorded in multinational organisations, and nine failures each were discussed by respondents who work in national and local organisations respectively.

The implication of this is that the number of recorded failures that would occur in multinational organisations operating across Nigerian industries may be less than the number of failure cases that would be observed in either a national or local Nigerian organisation. (See next table). As such, multinational organisations are commonly known for their “superior efficiency as an as an organisational vehicle by which to transfer this knowledge across borders” (Kogut and Zander 1993). In other words, multinational organisations are usually in a better position to survive in foreign markets than either national or local organisations because of their acquired comparative advantages in different market regions (Kogut and Zander 1993) which they are able translate into the credible and well-integrated action plans needed to overcome commonly observed failures (Hedlund and Dunning 1993). Hence, the assumption that multinational organisations are more widespread in industries where the output of that industry is characterised by high capital and significant level of scientific and technical expertise (Markusen 1995) is thus supported by this analysis.

Table 28: A comparison among multinational, national and local organisations

Organisation type	Respondent who discussed the failure cases	The various types of failed organisation-wide changes discussed by pilot study respondents					Count	Percentage
		Changes to management & organisational structure	Lean thinking/ philosophy & implementation	Enterprise Resource Planning Systems Implementation	Customer Relationship Management-based Changes	(Total) Quality Management Systems-oriented programs		
Multinational	Int.2			x			1	14.2%
	Int.9		x				1	
	Int.20				x		1	
National	Int.1		x	x		x	3	42.9%
	Int.5	x					1	
	Int.8		x				1	
	Int.13			x			1	
	Int.15			x			1	
	Int.16				x	x	2	
Local	Int.6		x				1	42.9%
	Int.11		x				1	
	Int.12					x	1	
	Int.14		x				1	
	Int.17				x		1	
	Int.18			x			1	
	Int.21		x	x	x		3	

4.4 Chapter Summary

This pilot study results have been presented in this chapter. The results have further provided credence that there indeed exists a need for this study by:

- i. Establishing that fairly large number of organisation-wide changes being implemented have the tendency of improving organisations' performance if successfully implemented;
- ii. Confirming that organisations' are finding it difficult to successfully implement, and sustain benefits of implemented, organisation-wide changes;
- iii. Highlighting that a large percentage (which in this study was found to 71%) of organisation-wide changes that are implemented with ample preparedness do fail. Hence, studies such as this that tend to highlight specifics actions that managers can follow over the life of organisation-wide changes would prove beneficial;
- iv. Revealing that a sizeable number of organisation-wide changes that fail cause, at least, noticeable disruptions to organisations operations. Furthermore, the pilot study analyses uncover that failed organisation-wide changes that are not rightly and timely rectified can eventually create damaging effect;
- v. Providing guidance on how senior management in organisations can: (a) successfully implement complex organisation-wide changes in uncertain business environments; (b) avoid common lean implementation pitfalls; (c) endeavour to successfully implement Enterprise Resource Planning systems; and (d) manage employees' resistance borne out of negative perception of organisation-wide changes implemented in their organisations.

The results of the survey study are presented in Chapter 5.

CHAPTER 5

PRESENTATION OF SURVEY RESULTS

5.1 Respondents' profile

As shown in Table 29, approximately 60% of all the respondents were male and 40% female. Approximately, 92% of the total respondents fell below the age of 40 years; with the majority of the respondents within the age group 31 – 40 years. From the table, it can also be seen that the majority of the participants in the surveyed organisations were to a great extent educated. Of the 304 respondents that participated in this study, across the nine organisations, only 34 had educational qualifications below bachelor's degree level. Roughly 57% of the respondents had attained a bachelors' degree; 31% hold a master's degree while the remaining 5 respondents hold doctoral degrees.

Table 29: Demographic data of respondents

	Categories	Count	Percent
Gender	Female	182	59.9
	Male	122	40.1
Age Group	Under 25 years	27	8.9
	26 - 30 years	118	38.8
	31 - 40 years	133	43.8
	41 - 50 years	22	7.2
	Over 50 years	4	1.3
Number of years that respondents have worked for organisation	0 - 2 years	95	31.3
	3 - 5 years	134	44.1
	6 - 10 years	53	17.4
	11 - 19 years	20	6.6
	Over 20 years	2	0.7
Education qualification	O' levels certificate	6	2.0
	Higher National Diploma	28	9.2
	Bachelor Degree	171	56.3
	Master Degree	94	30.9
	Doctoral Degree	5	1.6

5.2 Assessment of the scales used in this study

This section presents both descriptive and explanatory analyses of the item constructs for each of the developed scales used in evaluating this study's research themes. In addition, factor analysis is performed in order to explain the prominent factors that notably influence these research themes. Then, correlation and

regression analyses are done. By these means, the researcher was able to establish the relationships among the independent variables confirmed through the factor analysis and dependent variables (which in this case are the research themes).

5.2.1 Employees' readiness to support organisation-wide changes (ERSC)

The scale used to evaluate ERSC was divided into four sub-divisions, namely Employees' Attitude based on Perceived Change Benefits (PCB), Effective Communication (EC), Employees' Loyalty (EL) and Employees' Affective Commitment (AC). Each of the 304 respondents were asked to indicate the response that best rates how well each of the item constructs matches their belief on a five-Likert response scale. The available responses were; not at all, a little bit, moderately, quite a bit and very much. The results of each of the sub-divisions are presented under each of the next sub-headings.

5.2.1.1 Employees' Attitude based on Perceived Change Benefits (PCB)

The obtained Cronbach's alpha (α) coefficient for the 9-item scale used to appraise PCB was 0.734; which indicated that the scale was reliable. This suggests that the instrument of measure used to assess employees' readiness to support organisation-wide changes was internally consistent. In Table 30, a breakdown of respondents' overall responses to each of the item constructs is presented. In relation to the first item construct (PCB1), "I do not trust that such changes will make things better for me", 20.1% of the respondents marked not at all. 6.3% were "very much" and 17.1% were quite a bit certain that organisation-wide changes do not make things better for them respectively. Lastly, 98 of the 304 crossed moderately on the five-Likert scale; hence they somewhat not trust that organisation-wide changes do not make things better for them.

PCB2 was used to form an opinion on whether organisation-wide changes make employees "fear the unknown". Such unknowns include the fear of retrenchment. About a third of the respondents checked not at all, 25.3% marked a little bit, 20.4% pronounced that organisation-wide changes moderately make them fear the unknown and 15.5% quite agreed that organisation-wide changes make them fear

the unknown. Only 23 respondents were positive that organisation-wide changes very much make them fear the unknown. Question PCB3 was more specific on finding out if employees “lose some of the benefits that they presently enjoy”. 77 and 69 respondents marked a little bit and moderately respectively on the scale. Although 10.9% of the respondents suggested that they might quite a bit, and 6.6% very much believed that they might lose some of the benefits that they presently enjoy, 105 respondents indicated that they will in no way lose some of the benefits that they presently enjoy.

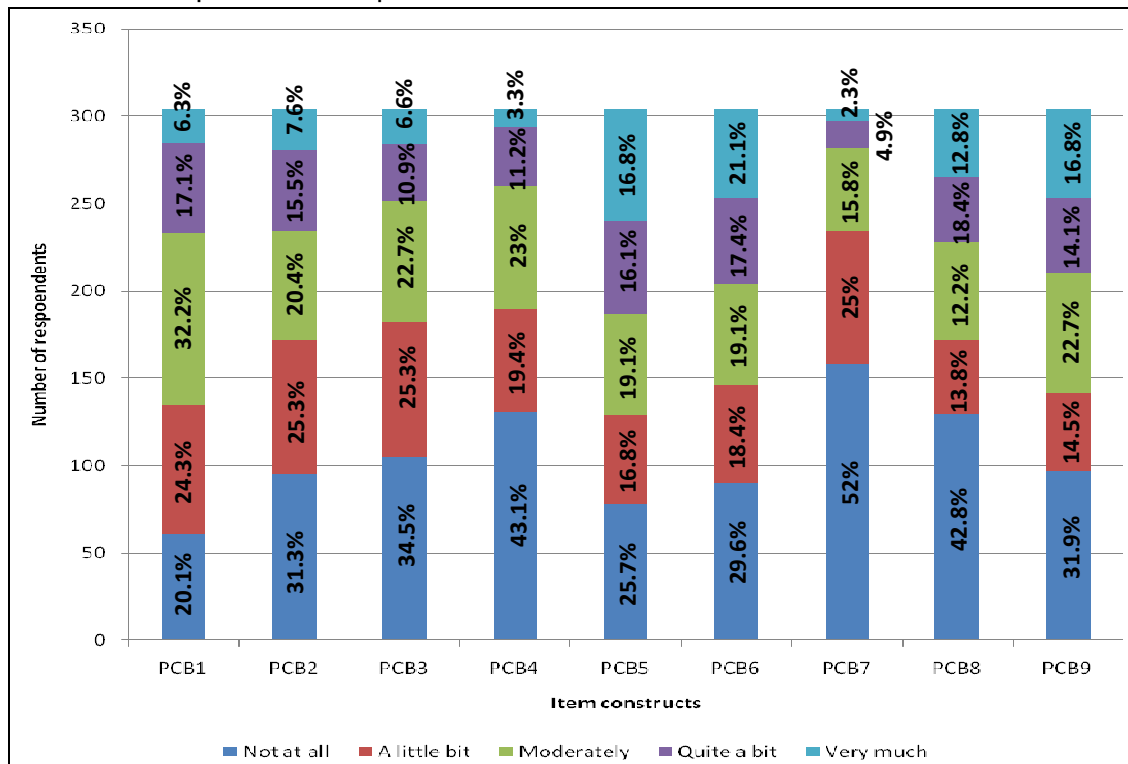
131 respondents chose “not at all” to the fourth item construct (PCB4). This suggests that do feel obliged to support organisation-wide changes. 59 respondents marked a little bit and 70 respondents chose moderately. 10 respondents indicated that they “quite a bit” do not feel any obligation to support organisation-wide changes while 34 respondents expressed that they very much do not feel any obligation to support organisation-wide changes. The fifth item construct (PCB5) assessed employees’ resentment once they perceive that an ongoing organisation-wide change would affect them negatively. Respondents’ answers show a relatively even spread with no really significant results. 25.7% of the respondents indicated that they will not at all resent an ongoing organisation-wide change even if it would affect them negatively. 16.8% of the respondents suggested they would show a little bit of resentment whereas 19.1% supposedly will moderately resent such organisation-wide changes that would have negative effects on them. A cumulative total of 38.5% of the respondents would resent organisation-wide change either quite a bit or very much.

PCB6 was used to evaluate how employees perceive whether they might lose their jobs should they oppose certain changes being implemented by their management. 90 respondents marked not at all and 56 respondents selected a little bit. 58 respondents somewhat suggested there exists some possibilities, as they selected moderately. 49 respondents crossed quite a bit and 51 respondents were very much convinced that they might lose their jobs should they oppose certain changes being implemented by their management. In relation to PCB7, a significant 42.8% of the respondents indicated that they are not at all reluctant to support organisation-wide changes. However, the remaining respondents expressed varying degree of doubts;

13.8% of the respondents marked a little bit, 18.4% selected moderately, 12.2% chose quite a bit and 39 respondents picked very much on the five-Likert scale.

The eighth and ninth item constructs, that is PCB8 and PCB9, were used to investigate employees' disposition to their organisation and eventual success of organisation-wide change respectively. As regards PCB8, 130 respondents intimated that they still find their work interesting/ challenging. Although to a varying extent, other respondents suggested that they no longer find their work as interesting/ challenging. 42 respondents marked that they no longer find their work as interesting/ challenging a little bit. 56 respondents said that to a moderate extent, they no longer find their work as interesting/ challenging. 37 respondents selected quite a bit and 29 respondents circled very much on the scale. With respect to PCB9, 39 respondents very much care less whether organisation-wide changes are successful while 37 respondents care quite a bit. 56 respondents care moderately and 42 respondents care a little bit. 31.9% indicated that they care that implemented organisations' organisation-wide changes end up being successful.

Table 30: Respondents' responses in relation to PCB



Factor analysis for employees' attitudes

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of Sphericity were both satisfactory (Field 2009). As shown in Table 31, the estimated KMO was .809, and the Bartlett's Test was significant (at a sig. value of $p < 0.0001$ for a 2 tailed test). The implication of this is the assurance that the factor analysis would generate unique factors. The Principal Component Analysis (PCA) conducted produced two exclusive factors, each with eigenvalues exceeding 1. The first factor, employees' resentment based on past experience (ERPE), and the second factor (employees' non-supportive behaviour, ESB) explains 36.42% and 14.89% of the total variance respectively. The rotated varimax solution had 5 items converged under factor 1 while 3 items congregated under factor 2. One item construct (i.e. PCB8) did not fall under any of the two factors; so PCB8 was subsequently analysed as a factor itself. Hence, PCB8 is thereafter referred to as employees' non-interest in their organisations' ability to successfully implement organisation-wide changes in later parts of this report..

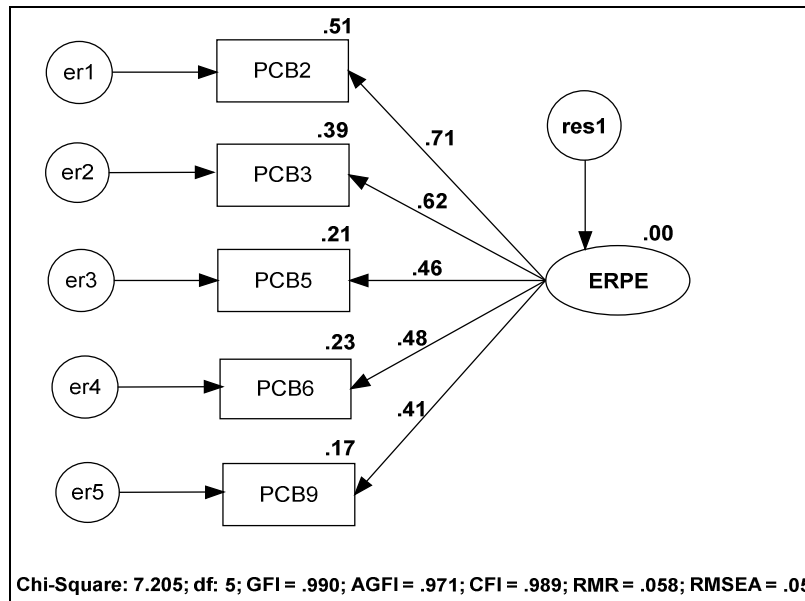
Table 31: Rotated Component Matrix^a for PCB

	Component	
	1 Employees' Resentment based on Past Experience, ERPE	2 Employees' Non-supportive Behaviour, NSB
PCB2	.689	
PCB3	.609	
PCB5	.499	
PCB6	.740	
PCB9	.561	
PCB1		.636
PCB4		.798
PCB7		.595
PCB8		
KMO = .809; Barlett's Test of Sphericity (chi-square: 309.17; df:36) = 0.000		
Extraction Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalization a. Rotation converged in 3 iterations		

Confirmatory factor analyses of the varimax rotated factors

Confirmatory factor analysis (CFA) for ERPE, with its measures of goodness of fit, is shown in Figure 21. All the 5 items correlated positively with ERPE. PCB2, which was used to assess whether employees fear the unknown when they hear that their management wants to embark on organisation-wide changes, correlated the greatest. For example, should ERPE increase by 1 standard deviation (SD), PCB2 will also increase by 0.71 standard deviations. ERPE had the least correlation with PCB9; which was the item construct used to assess whether employees cared less if organisation-wide changes were successful. The calculated goodness of fit measures was well within the recommended level of indices.

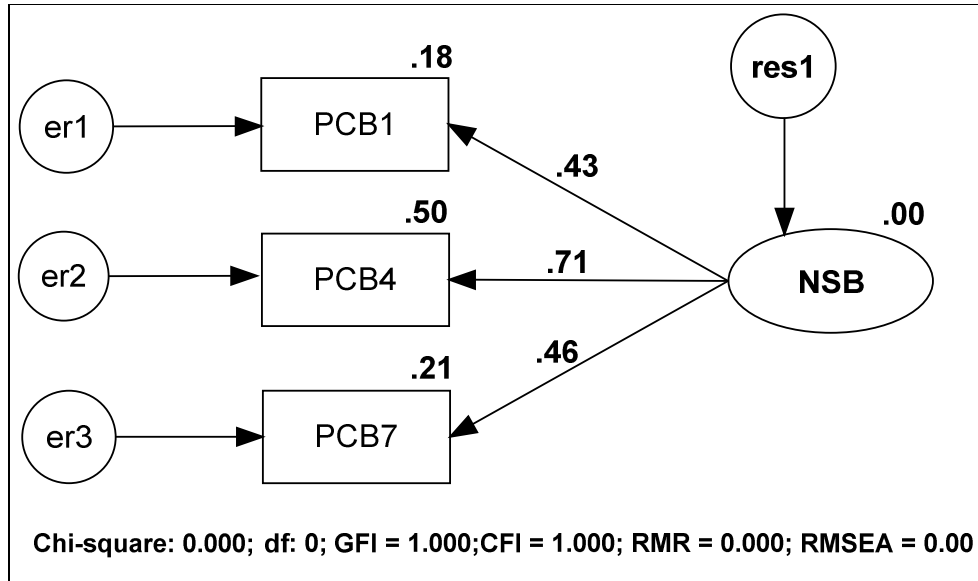
Figure 21: Confirmatory factor analysis for ERPE



In the same manner, CFA for employees' non-supportive behaviour (NSB) was performed. The model was a perfect fit; GFI = 1.000, CFI = 1.000, RMR = 0.00 and RMSEA = 0.000 as can be seen in Figure 22. In the diagram, NSB has the most impact on PCB4. Thereby, in a situation where NSB increases, the chances that employees will feel no obligation to support such change will also increase. In summary, the probability that those employees' who are non-supportive of organisation-wide changes will also: (a) not trust that the changes will make things

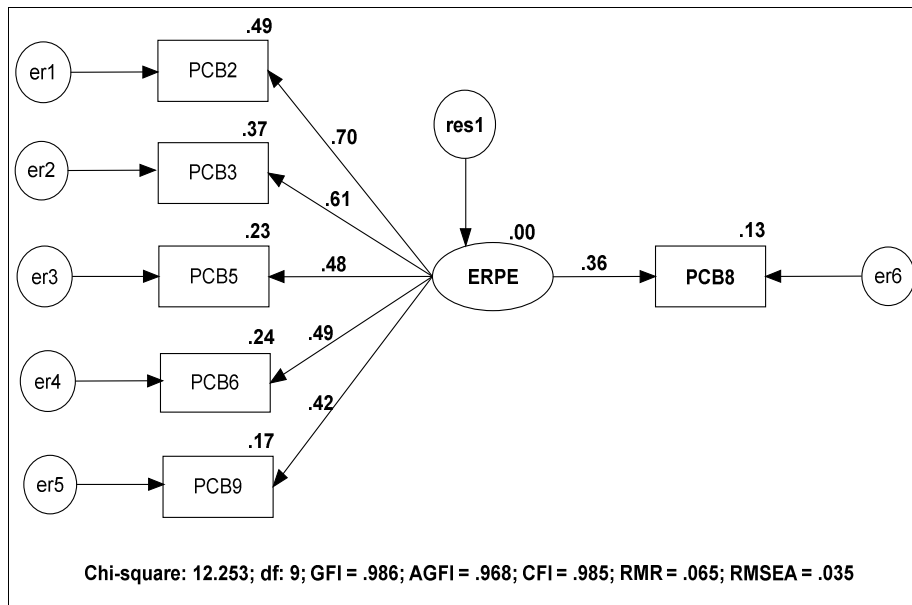
better for them; (b) not feel any obligation to such change; and (c) be reluctant to support the change is significant (at a sig. value of $p < 0.05$ for a 2-tailed test).

Figure 22: Confirmatory factor analysis for NSB



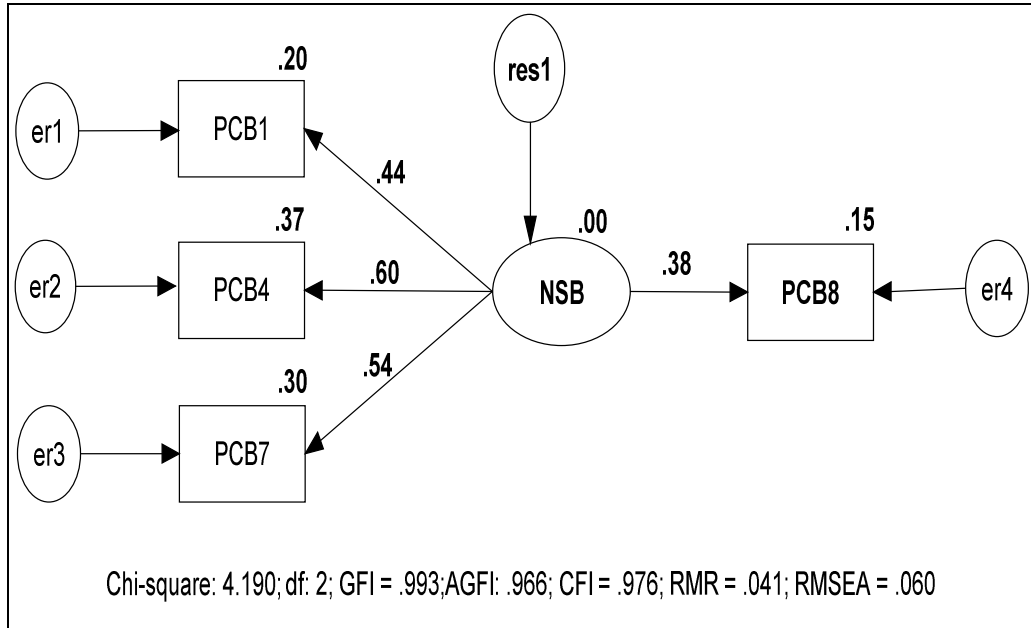
Next, the relationship between ERPE and PCB8 was explored. From the estimates shown in Figure 23, it can be rationalised that ERPE is positively related with PCB8. That is to say, as ERPE increases (for example, 1 SD), employees' expressed non-interest in their organisations' ability to successfully implement organisation-wide changes will also increase (in this case by .36 SD). Correspondingly, the standard deviations of PCB2, PCB3, PCB5, PCB6 and PCB9 will increase by a margin of 0.70, 0.61, 0.48, 0.49 and 0.42 respectively as ERPE increases by 1 SD. All the measures of goodness of fit indices were well-fitted within the recommended limits.

Figure 23: Relationship between ERPE and PCB8



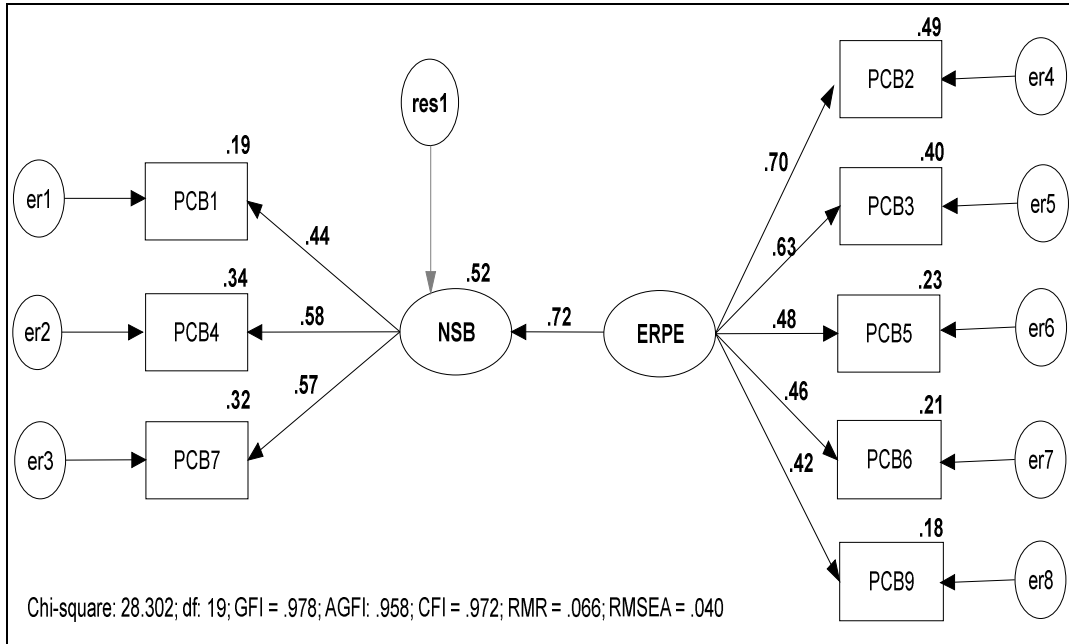
The relationship between NSB and PCB8 is presented in Figure 24. Any assumption that NSB has positive association with PCB8 is valid and significant (at a sig. value of $p < 0.05$ for a 2-tailed test). PCB4 correlated the most with NSB; followed by PCB7. PCB1 had the highest correlated estimate. The implication is that NSB has the relational capability to influence the extent to which employees' will feel obliged, trusting, interested and less reluctant to support organisation-wide changes. As shown in the next page, when NSB increases by 1 SD, PCB8 will also increase by 0.38 SDs.

Figure 24: Relationship between NSB and PCB8



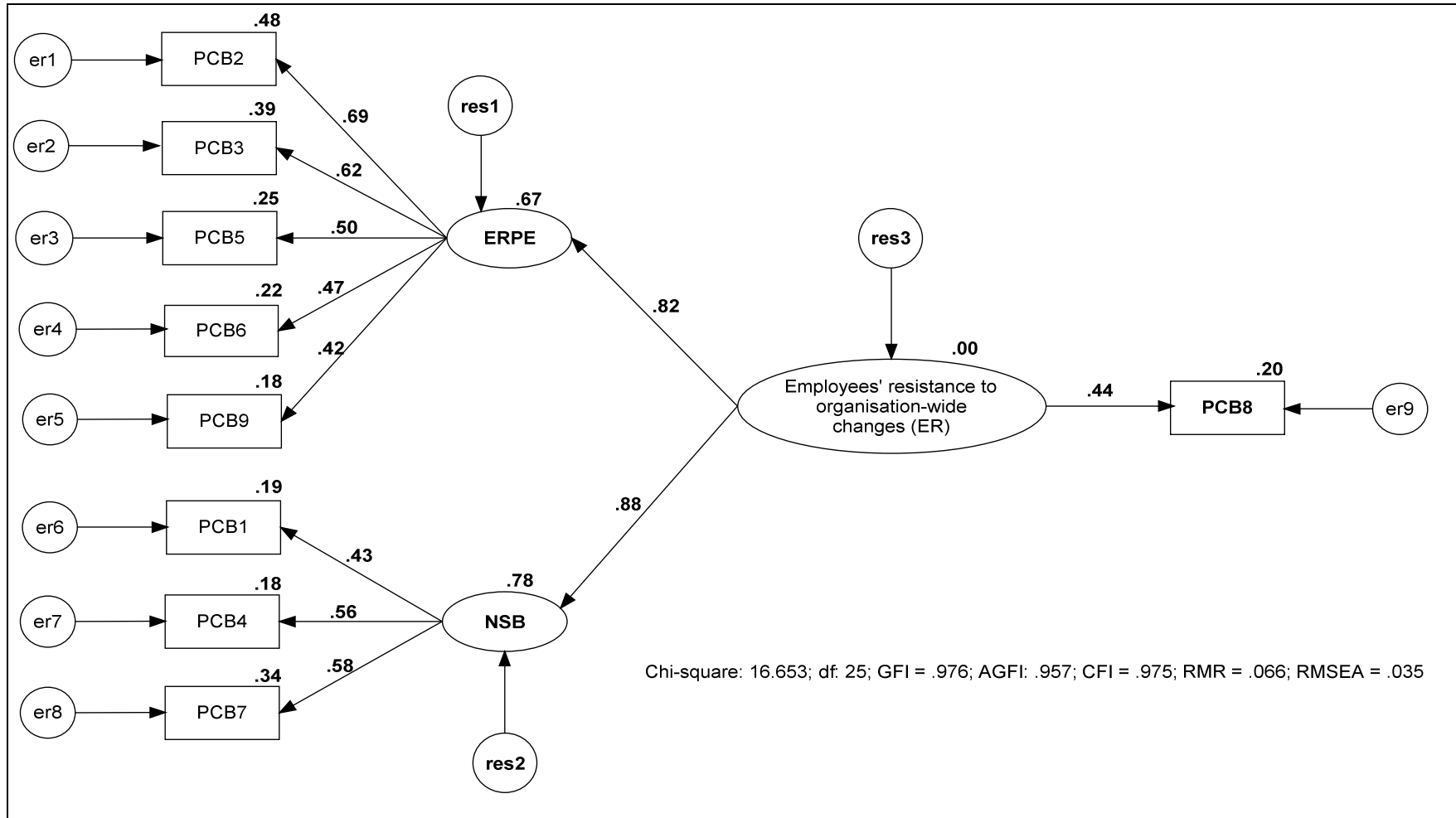
As shown in Figure 25, all the measures for the model's goodness of fit were satisfactory. The obtained Chi-square value (χ^2 : 28.302; df: 19) was significant; hence the outlined relationship between NSB and ERPE was found to be significant (at a sig. value of $p < 0.05$ for a 2-tailed test). This means that a possible increase in ERPE will at the same time result in an increase in NSB. Simultaneously, the estimated average SD values of PCB2, PCB3, PCB5, PCB6 and PCB9 will increase as ERPE increases. PCB2 will increase the highest while the PCB9 will increase the least. In summary, ERPE increases, the degree to which employees' will fear the unknown will be largely reinforced. Whereas, the probability that employees will silently resent implemented organisation-wide changes will increase the least.

Figure 25: Relationship between ERPE and NSB



The combined effect of ERPE and NSB on PCB8 was explored. The combination of ERPE and NSB was represented as employees' resistance (ER) to support organisation-wide changes. The associations were found to be significant (at a sig. value of $p < 0.05$ for a 2-tailed test). Also, the fit indices were between the recommended estimates. As shown in Figure 26, employees' that are found to resist and resent organisation-wide changes and/or exhibit non-supportive behaviours will most likely no longer find their work interesting/ challenging.

Figure 26: Relationship between ER and PCB8



Validating research hypothesis 1

Hypothesis 1 states that a positive correlation exists between employees' non-interest in their organisations' ability to successfully implement organisation-wide changes (i.e. PCB8) and: (a) employees' resentment based on past experience (ERPE); and (b) employees' non-supportive behaviour (NSB). It can be seen in Table 32 that the F-test was significant (for a sig. value of $p < 0.001$; 2 tailed test). Likewise, the t-value was found to be significant (also for a sig. value of $p < 0.001$; 2 tailed test). The obtained Durbin-Watson (i.e. an approximated value of 2) indicated that the relationship can be supported with sufficient evidence from the data collected (Field 2009; Granger and Newbold 1974; Nerlove and Wallis 1966). In model 2, the predictability for PCB8 increases from 10.2% to 25.7%. Therefore, hypothesis 1 is accepted – An increase in PCB8 will cause a positive increase in both ERPE and NSB.

Table 32: Hierarchical regression analysis for ER and NSB

Model	Unstandardised Coefficients		Standardised Coefficients	R	R ²	F	Sig. Value	t-value	Sig. Value
	β	Standard Error	β						
1. (Constant)	2.385	.079		.319	.102	34.326	.000	30.144	.000
ERPE	.464	.079	.319					5.859	.000
2. (Constant)	2.385	.072		.507	.257	52.136	.000	33.090	.000
ERPE	.464	.072	.319					6.431	.000
NSB	.573	.072	.394					7.932	.000
Durbin-Watson			1.905						
Independent Variables: ERPE, NSB; Dependent Variables: PCB8									

5.2.1.2 Effective Communication (EC)

The obtained Cronbach alpha for EC was 0.762; thus suggesting that the scale has internal consistency and indeed measured what it was designed to assess. Nine items made up the EC scale. Respondents were asked to rate how effective the communication system in their organisations is on a five Likert scale. A breakdown of respondents' overall responses to each of the 9-items is presented Table 33. There

were 34 respondents that answered not at all to the first question (EC1) and 35 respondents marked a little bit. 87 respondents selected moderately. 77 respondents indicated that they very much feel the communication system in their organisation was effective while 77 marked quite a bit. EC2 was used to assess whether respondents' immediate bosses are always willing to clarify and share information. 2% marked not at all. 11.8% and 22.0% of the respondents selected a little bit and moderately respectively. 26% chose quite a bit and 116 respondents responded that their immediate bosses are very much willing to clarify and share information with them.

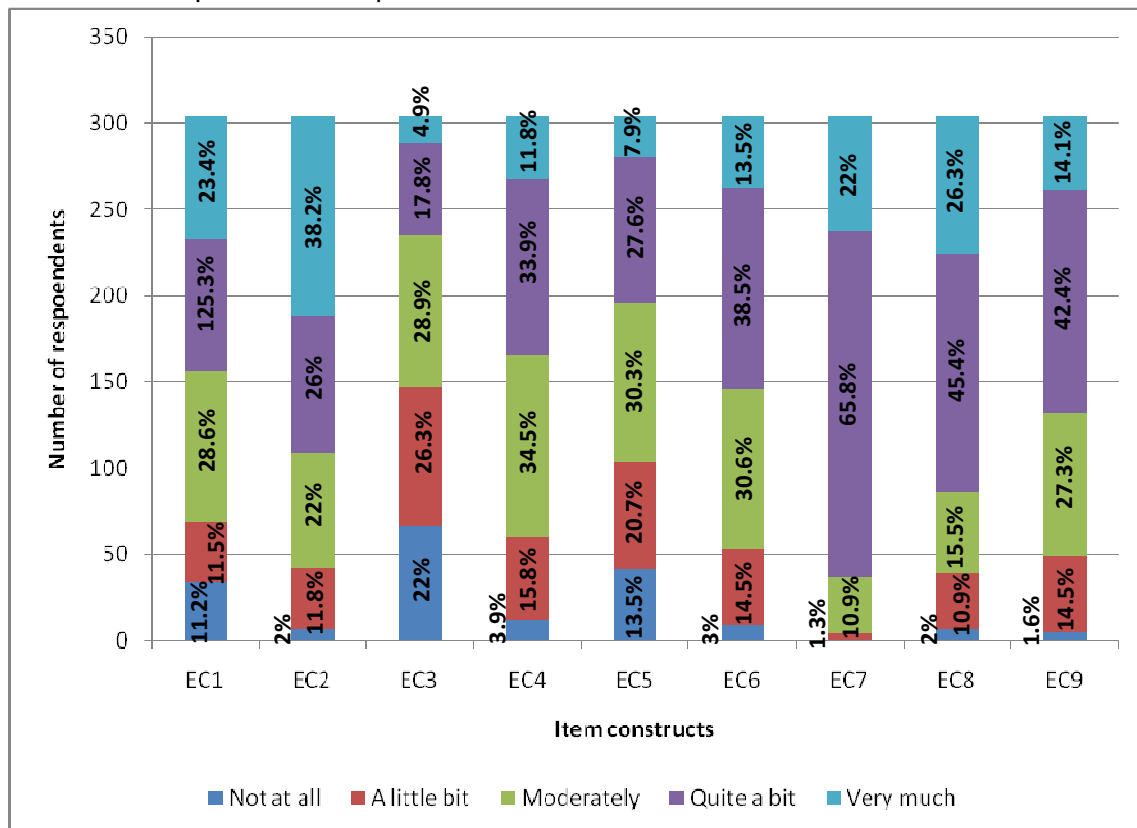
The third item, EC3, was used to review how knowledgeable respondents are regarding organisation-wide changes in their organisations. Only 15 respondents were very much aware of the events that happen in their respective organisations at every point in time. Other respondents' answers were of no noticeable significance – 67 respondents chose not at all, 80 respondents selected a little bit, 88 respondents selected moderately and 55 respondents hinted quite a bit. EC4 is similar to EC3; it was used to assess whether respondents can easily access needed information regarding implemented organisation-wide changes. 105 respondents answered moderately and 103 respondents chose quite a bit. These two categories represent approximately 68.4% of the total respondents.

EC5 was used to assess employees' freedom in expressing their disapproval without being victimised. 41 respondents said not at all; meaning that they are not free to express their disapproval without being victimised. 63 respondents marked a little bit, 92 respondents selected moderately and 84 respondents chose quite a bit. 24 respondents were very much convinced they are free to express their disapproval without being victimised. The sixth item construct, EC6, was designed to appraise whether organisations continuously work to make the communication style effective. 117 respondents answered quite a bit, 93 respondents chose moderately, 9 of the respondents selected not at all and 41 picked very much.

In relation to EC7, none of the respondents chose the not at all option on the scale. 200 respondents chose quite a bit. This represents approximately 66% of the total

respondents. 4 of the respondents answered a little bit. Hence, 1.3% of the respondents are convinced a little bit that they are allowed to make input to key activities and issues involved in managing my work. 10.9% of the respondents selected moderately and 22% of respondents picked very much. EC8 was used to identify whether respondents' management have periodic meetings with employees. Roughly 45% of the respondents chose quite a bit and approximately 26% selected very much. 10.9% and 15.5% of the respondents chose a little bit and moderately respectively. Only 6 respondents said not at all. The final item on the scale was used to recognise the extent to which employees are involved in decision making in their organisations . 5 respondents, 44 respondents, 83 respondents, 129 respondents and 43 respondents respectively marked not at all, a little bit, moderately, quite a bit and very much.

Table 33: Respondents' responses in relation to EC



Factor analysis for Effective Communication (EC)

Three factors with eigenvalues 3.138, 1.181 and 1.034 that accounted for 53.53% of the total variance observed for effective communication were extracted. Both the KMO test and the Barlett's Test of Sphericity were acceptable and considered appropriate. Through varimax rotation, EC1, EC6, EC8 and EC9 converged under the first factor which was the existence of clear communication style (CCS) in organisations; the second factor had EC2, EC3 and EC4 while EC5 and EC7 congregated under factor 3. EC5 fell under two factors, that is, factor 2 and factor 3. However, EC5 as an item construct was adopted under factor 3 because its correlation value under factor 3 is higher than its correlation estimate under factor 2. (See Table 34 for all the results discussed).

Table 34: Rotated Component Matrix^a for EC

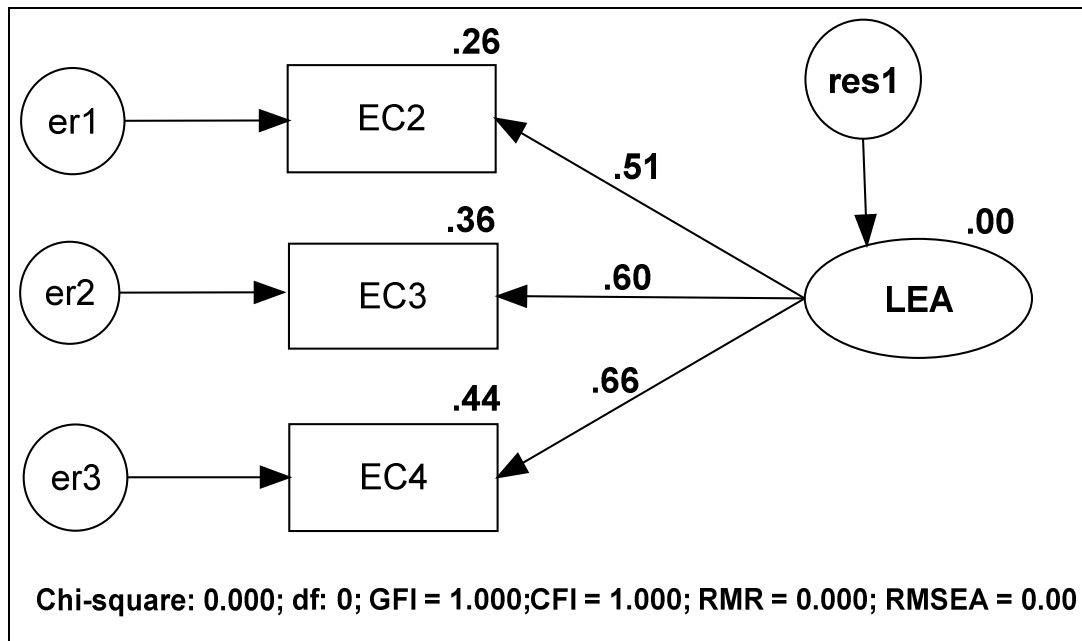
	Component		
	1 Organisations' effort to make communication effective (OECSE)	2 Level of Employees' Awareness (LEA)	3 Opportunity for Employees' to Freely Express themselves (OEFE)
EC1	.717		
EC6	.696		
EC8	.576		
EC9	.708		
EC2		.590	
EC3		.707	
EC4		.758	
EC5		.480	.715
EC7			.742
KMO = .796; Barlett's Test of Sphericity (Chi-Square : 181.26; df: 36) = 0.000			
Extraction Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalization a. Rotation converged in 3 iterations			

Confirmatory factor analyses of rotated factors for EC

The results of the confirmatory factor analysis for LEA concerning typical organisation-wide changes are presented in Figure 27. Based on the goodness of fit

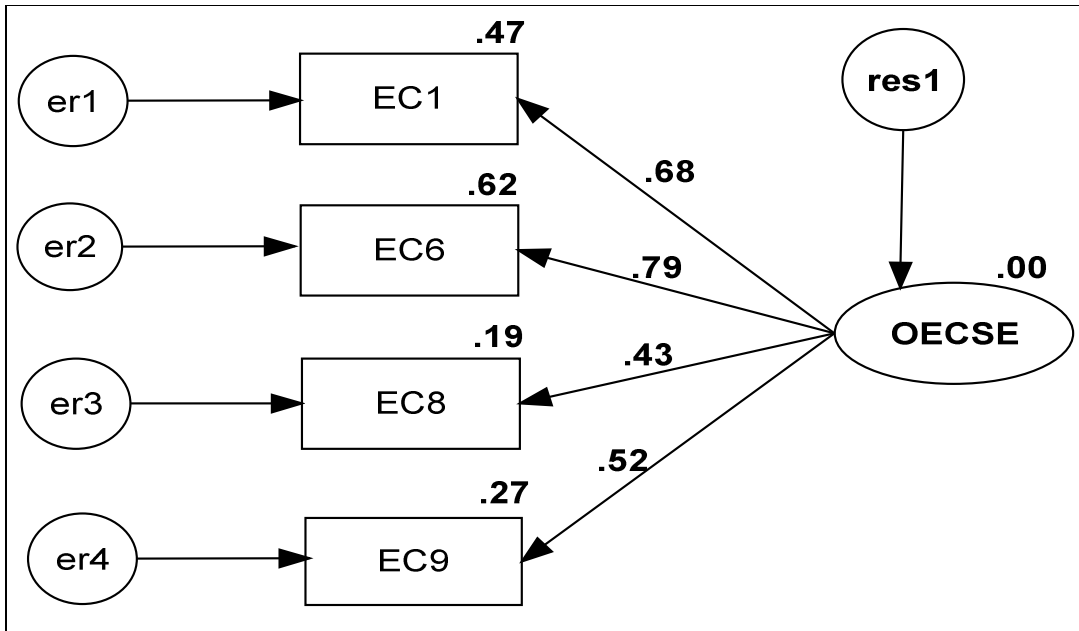
results obtained, the model indicated that the 3-item constructs that converged under LEA can convincingly explain the variations noticeable in LEA. As shown in the figure, EC2, EC3 and EC4 will increase should the level of employees' awareness increase. That is to say, employees' percept of their immediate bosses always wanting to clarify and share information will increase as the level of employees' awareness increase.

Figure 27: Confirmatory factor analysis for LEA



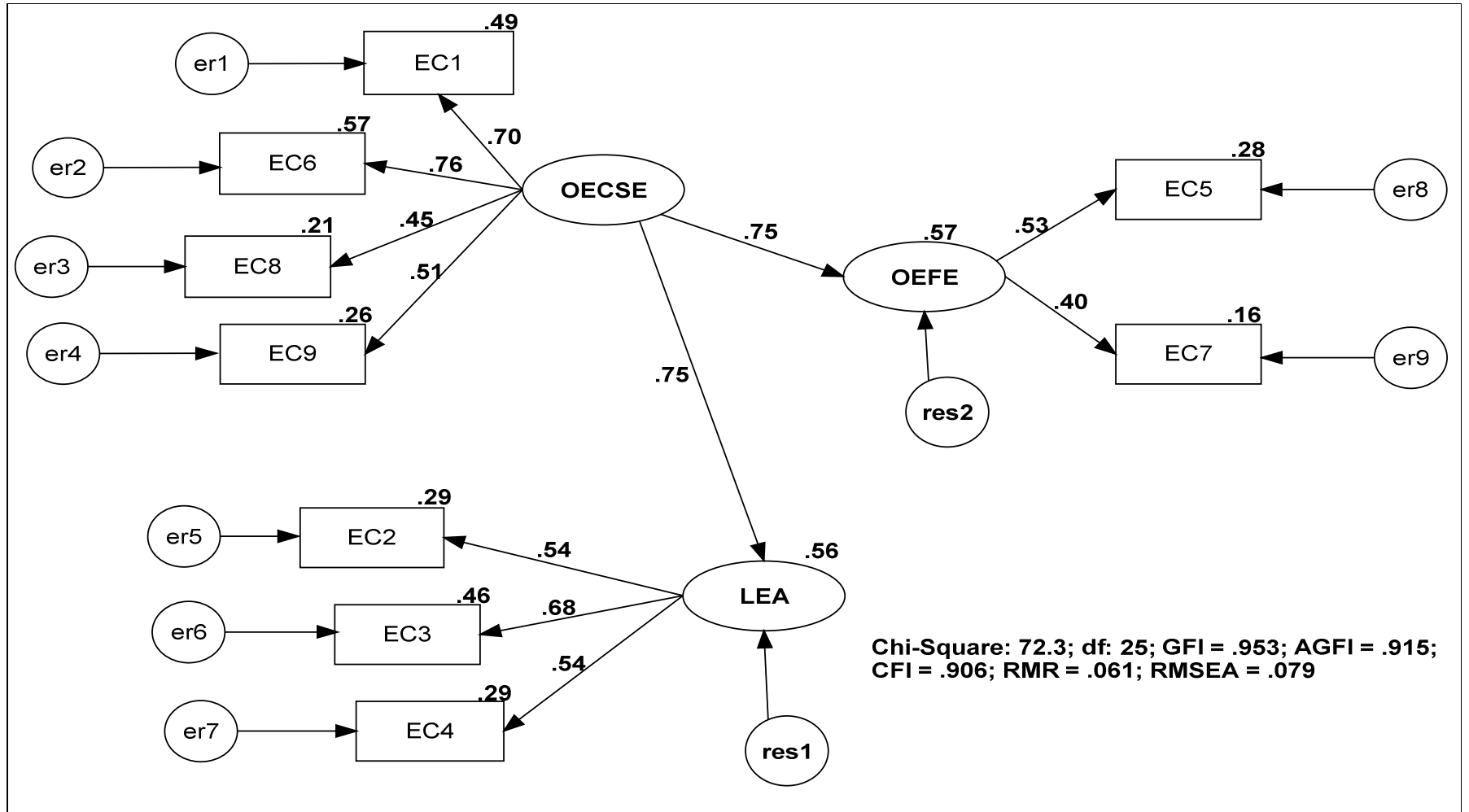
Confirmatory factor analysis was also performed for the second factor; which was OECSE. The results are presented in Figure 28, fitted appropriately as expected. OESCE correlated positively with: (a) employees' perception that the communication system in their organisations is effective; (b) the extent to which employees are involved in decision making; (c) employees' perception that their organisations indeed make efforts to enhance the communication system in their organisations; and (d) employees' statement that their organisations' management have periodic meeting with employees. The implication of this is that these 4-item constructs is an indication of organisations' attempt to consciously improve their communication system.

Figure 28: Confirmatory factor analysis for OECSE



Correspondingly, an organisation's effort to make communication system effective (OECSE) will result in an increase in the level of employees' awareness and at the same time help to create more opportunities through which employees are allowed to make input to key activities and issues involved in managing their work (that is, EC7 will increase as well). Simply put, an increase in OECSE would increase the item constructs that converged under both LEA and OEFE. Indirectly, OECSE further exerts a positive influence on EC2, EC3, EC4, EC5 and EC7. For instance, supposedly OECSE increases by 1 standard deviation, EC2, EC3, EC4, EC5 and EC7 will also increase by .507, .667, .462, .527 and .210 standard deviations respectively. The result of goodness of fit indices for this hypothesised relationship fits adequately as shown in Figure 29.

Figure 29: Relational importance of OECSE on LEA and OEFE



Validating research hypothesis 2

Hypothesis 2 states that a positive correlation exists between PCB and EC. The bivariate correlation result in Table 35 indicates that the two research themes are significantly and positively correlated. In other words, EC is directly proportional to PCB.

Table 35: Correlation result between PCB and EC

	PCB	EC
PCB	1	.362**
EC	.362**	1

** Correlation is significant at the 0.01 level (2-tailed).

Result of the linear regression analysis is presented in Table 36 on the next page. The use EC as the predictor can assertively explain 36.20% of the variance in PCB. The positive association is further established. In a situation where by EC is improved, PCB will also increase. The F-test and the t-value estimates both show that this association is significant (for a sig. value of $p < 0.001$; 2 tailed test). The Durbin-Watson was 1.808; hence indicating that the hypothesis can be backed up with sufficient evidence from the data (Field 2009; Granger and Newbold 1974; Nerlove and Wallis 1966).

Table 36: Linear regression analysis for EC and PCB

Model	Unstandardised Coefficients		Standardised Coefficients	R	R ²	F	Sig. Value	t Value	Sig. Value
	β	Standard Error	β						
1 (Constant)	.583	.080		.362 ^a	.131	45.444	.000	7.274	.000
EC	.475	.070	.362					6.741	.000
Durbin-Watson			1.808						

a. Independent Variable (Constant): EC; Dependent Variable: PCB

5.2.1.3 Employees' Loyalty (EL)

The scale used to assess EL was found to be reliable; the Cronbach's alpha was 0.717. A bar chart showing the breakdown of the item is presented in Table 37. The first item, EL1, was used to assess EL was intended to determine whether respondents think implemented organisation-wide changes were necessary. Respondents' responses were fairly spread. The responses are as follows: 88 respondents chose not at all, 52 respondents picked a little bit, 75 respondents selected quite a bit and 34 respondents thought implemented organisation-wide changes were very much necessary. In relations with EL2, 52 respondents do not at all think organisational changes reduce predictability in an organisation. 72 respondents answered a little bit, 82 respondents suggested it moderately and 55 hinted it does quite a bit. The remaining 45 respondents were very much definite that organisational changes do reduce predictability in organisations.

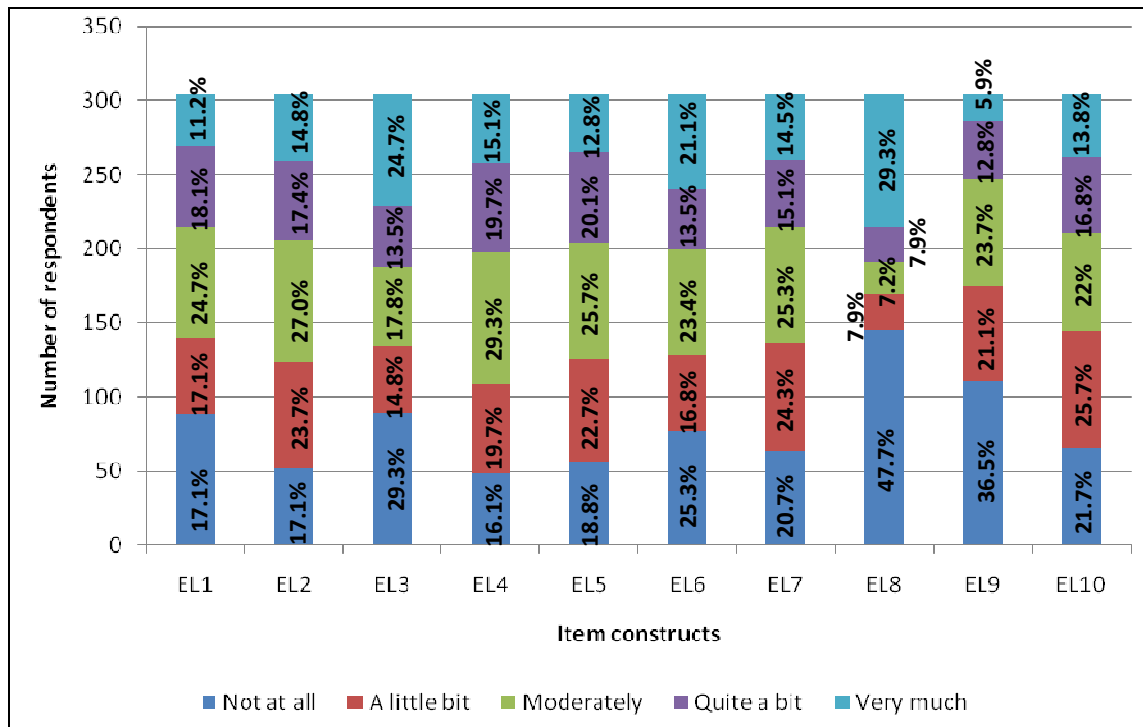
EL3 was used to determine whether respondents feel very little attachment to their organisation. Approximately 29.3% of the respondents replied not at all; which implies that they have strong attachment to their organisations. 14.8% said a little bit and 17.8% of the respondents indicated that they have moderate attachment to their organisation. 13.5% of the respondents indicated that they do feel very little attachment quite a bit and 24.7% intimated that they very much feel very little attachment to their organisations. Regarding EL4, 16.1% of the respondents indicated that their organisation do not at all differ from other similar organisations. 19.7% believed their respective organisations are different from other similar organisations a little bit. 29.3% said the difference is moderate, 19.7% said quite a bit and 15.1% of the respondents indicated that their respective organisations are very much different from other similar organisations.

EL5 was included in the scale so as to establish if respondents think they could be paid more in another organisation for the same job that they do in their organisations. 57 respondents answered not at all, 69 respondents assumed they could be paid a little more and 78 respondents presumed they will be paid moderately more. 61 respondents suggested they could be paid quite a bit more and

39 respondents concluded they could be paid very much more in another organisation for the same job that they do in their organisations. The idea of respondents not minding to work for their organisations till they retire was assessed using EL6. 77 respondents selected not at all, 51 respondents picked a little bit, 71 respondents chose moderately, 41 respondents chose quite a bit and 64 respondents opted for very much. EL7 was used to assess the extent to which employees' understand some of their organisations' objectives for implementing organisation-wide changes. 63 respondents said not at all, 74 respondents suggested they do a little bit and 77 chose moderately. 46 respondents do quite a bit and 44 respondents very much understand some of their organisations' objectives for implementing organisation-wide changes.

With EL8, the researcher sought to know if respondents regret working for their organisations. A significant 47.7% of the respondents selected not at all while also a considerable 29.3% of the respondents indicated that they very much regret working for their organisations. 24, 22 and 24 respondents answered a little, moderately and quite a bit respectively. The ninth item on the scale, EL9, sought to establish whether respondents would speak out if they see things as their manager does. 111 respondents circled not at all. 64, 72, 39 and 18 respondents answered a little, moderately and quite a bit respectively. The final item, EL10, was used to identify whether respondents first heard of implemented organisational changes through their colleagues. Respondents' answers are as follows: 66 respondents marked not at all, 78 respondents marked a little bit, 67 respondents marked moderately, 51 respondents marked quite a bit and 42 marked very much.

Table 37: Respondents' responses in relation to EL



Factor analysis for EL

The factor analysis for employees' loyalty produced a Kaiser-Meyer-Olkin (KMO) value of .675 and the Bartlett's Test for Sphericity was significant (at a significant value of $p < 0.0001$ for a 2-tailed test). Three factors with eigenvalues greater than 1 were extracted. Factor 1 explains 24.23% of the total variance, factor 2 explains 15.08% and factor 3 accounts for 10.60% of the total variance of the scale used to assess employees' loyalty. Results from the rotated component matrix for employees' loyalty, as illustrated in Table 38, shows that: (a) three constructs, namely EL3, EL6 and EL8, converged under factor 1, Employees' prolonged allegiance to their organisations (ENA); (b) EL1, EL2, EL9 and EL10 converged under employees' sincerity (ES) and (c) the remaining item constructs (that is, EL4, EL5 and EL7) fell under employees' continued belief in their organisations (ECB).

Table 38: Rotated Component Matrix^a for employees' loyalty

	Component		
	1	2	3
	Employees' non allegiance to their organisations (ENA)	Employees' sincerity (ES)	Employees' continued belief in their organisations (ECB)
EL3	.699		
EL6	.765		
EL8	.817		
EL1		.697	
EL2		.585	
EL9		.525	.481
EL10		.613	
EL4			.667
EL5			.472
EL7	.474		.497
KMO = .675; Barlett's Test of Sphericity (chi square: 383.911; df:45) = 0.000			

Extraction Method: Principal Component Analysis.

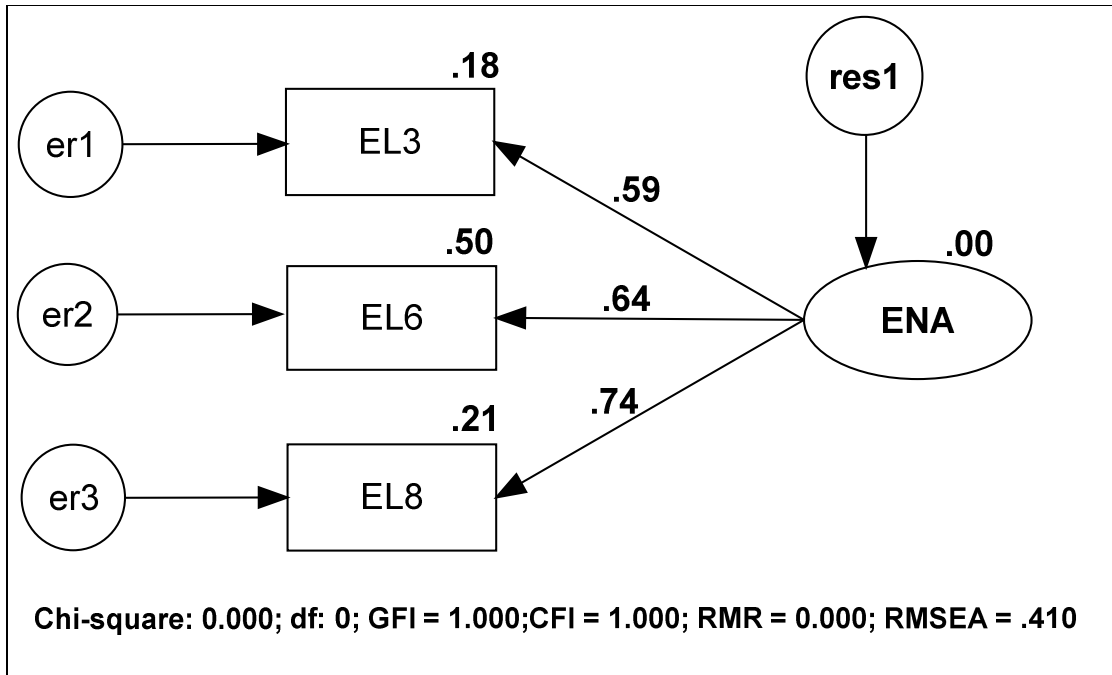
Rotation Method: Varimax with Kaiser Normalisation.

a. Rotation converged in 3 iterations.

Confirmatory factor analyses for the (extracted) rotated varimax factors

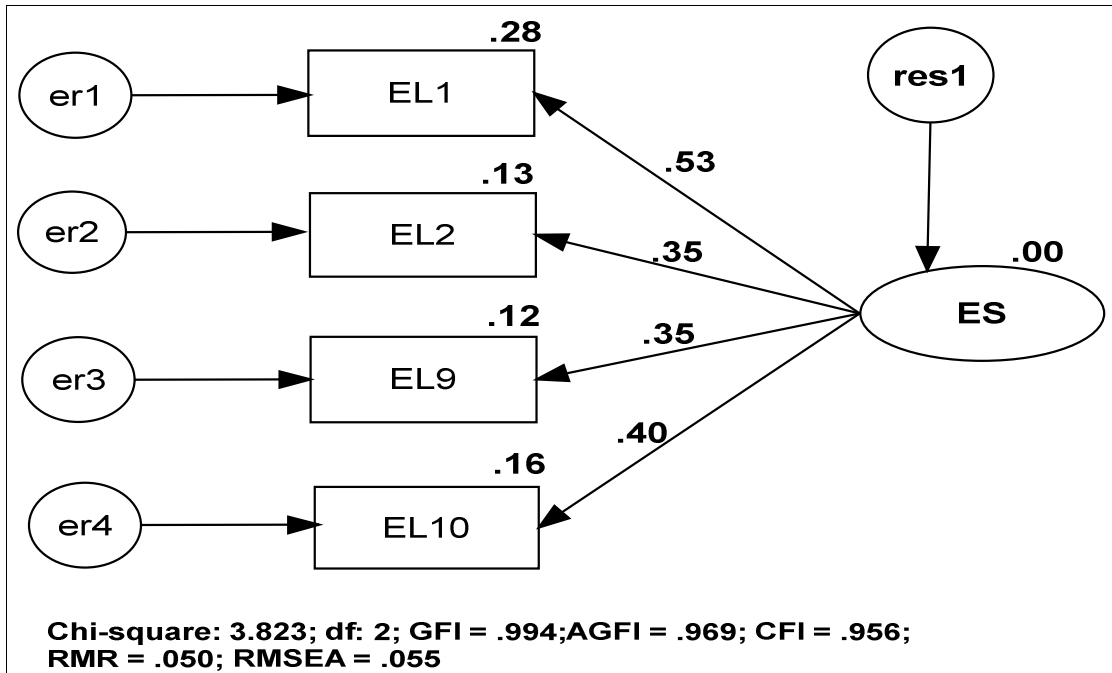
Confirmatory factor analysis for employees' non allegiance to their organisations (ENA) suggests that the hypothesised associations have positive associations as shown in Figure 30. The three items, (that is, EL3, EL6 and EL8) would increase when ENA increases. Hence, it can be inferred from the figure that ENA increases, the more employees would (i) feel very little attachment to their organisations; (ii) mind working for their organisation till when they retire; (iii) regret working for their organisations. The item construct, EL8, will increase the most though while EL3 will increase the least of the three item constructs. Though the value of RMSEA was more than the recommended limit, the model is still considered a perfect fit since all the other measures of goodness of fit indices were within the acceptable limits (Hu and Bentler 1998).

Figure 30: Confirmatory factor analysis for ENA



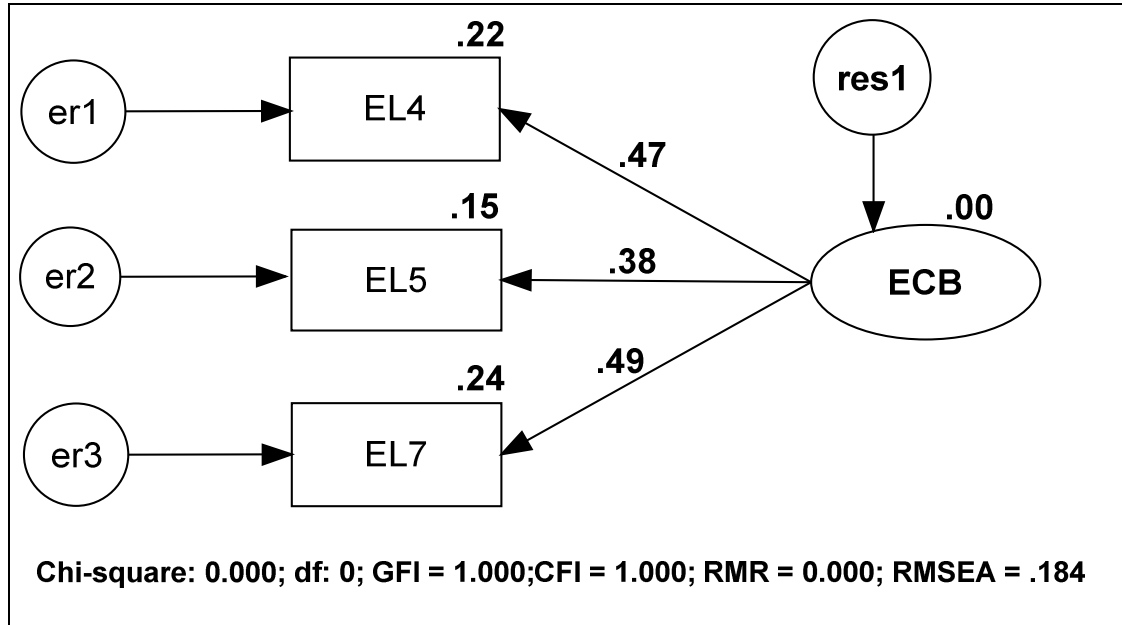
The measures of goodness of fit indices for Employees' Sincerity (ES) were well between the recommended limits as shown in Figure 31. This means that the 4-item constructs rightly reflect ES regarding organisation-wide changes. All the associations show positive correlations. This implies that as ES increases, the more likely employees will reveal whether (i) some of the organisation-wide changes implemented in their organisations now are not necessary; (ii) organisation-wide changes bring about uncertainties in their organisations; (iii) they would rather not speak about out when they see things differently as their manager,; and (iv) they first hear of the organisation-wide changes implemented in their organisations through hear-say. EL1 will increase the most while EL10 will increase the least out of the four items. EL2 and EL9 will both increase evenly.

Figure 31: Confirmatory factor analysis for ES



The last confirmatory factor analysis performed for EL was for employees' continued belief in their organisations, (ECB). As shown in Figure 32, the 3 items correlated positively with ECB. This suggests that as ECB increases, there will also be an increase in employees' belief that (i) their organisations are not different from other similar organisations, (ii) what their organisations pay them is as good as they would be offered for the same role in another company, and (iii) they understand the reasons for some of the organisation-wide changes implemented in their organisations. The goodness of fit index (GFI) and the comparative fit index (CFI) suggest that the assumed relationships are perfectly fitted and backed up with enough evidence from the data.

Figure 32: Confirmatory factor analysis for ECB



Validating research hypothesis 3

Hypothesis 3 states that employees' (positive) attitude based on perceived change benefits (PCB) and effective communication (EC) systems will both contribute to increasing employees' loyalty (EL). As shown in Table 39, the relationships among PCB, EC and EL correlates significantly (at a significant value $p < 0.01$, 2 tailed). Employees' loyalty and employees' communications correlates higher than employees' loyalty and employees' positive attitude based on perceived change benefits. The lowest correlation was between effective communication and employees' positive attitude based on perceived change benefits. This could possibly suggest that effective communication will have more impact on increasing employees' loyalty than employees' (positive) attitude based on perceived change benefits.

Table 39: Correlation results among EL, PCB and EC

	EL	EC	PCB
EL	1	.515**	.463*
EC	.515**	1	.362**
PCB	.463**	.362**	1

** Correlation is significant at the 0.01 level (2-tailed).

All things being equal, effective communication (EC) and employees' positive attitude based on perceived change benefits (PCB) should collectively have a positive relationship with employees' loyalty. In other words, Employee' loyalty will most likely increase when organisations' communication system is made effective and employees' positive attitude based on perceived change benefits boosted. Results of the hierarchical regression presented in Table 40 shows that the hypothesised relationship is significant, and is representative of the survey data. The F-ratio tests and the t-value are both significant (a significance value, $p > .0001$, 2 tailed tests). When only EC is used as a predictor, it explains 26.5% of the total variance of employees' loyalty. With the addition of PCB, the total variance increases to 35.3%.

Table 40: Hierarchical regression analysis for EL, EC and PCB

Model	Unstandardised Coefficients		Standardised Coefficients	R	R ²	F	Sig. Value	t Value	Sig. Value
	β	Standard Error	β						
1 (Constant)	.629	.042		.515	.265	108.86	.000	14.962	.000
EC	.385	.037	.515					10.434	.000
2 (Constant)	.523	.043		.594	.353	82.215	.000	12.214	.000
EC	.299	.037	.399					8.035	.000
PCB	.182	.028	.319					6.412	.000
Durbin-Watson			1.785						

Independent Variables: EC, PCB; Dependent Variable: EC

5.2.1.4 Affective Commitment (AC)

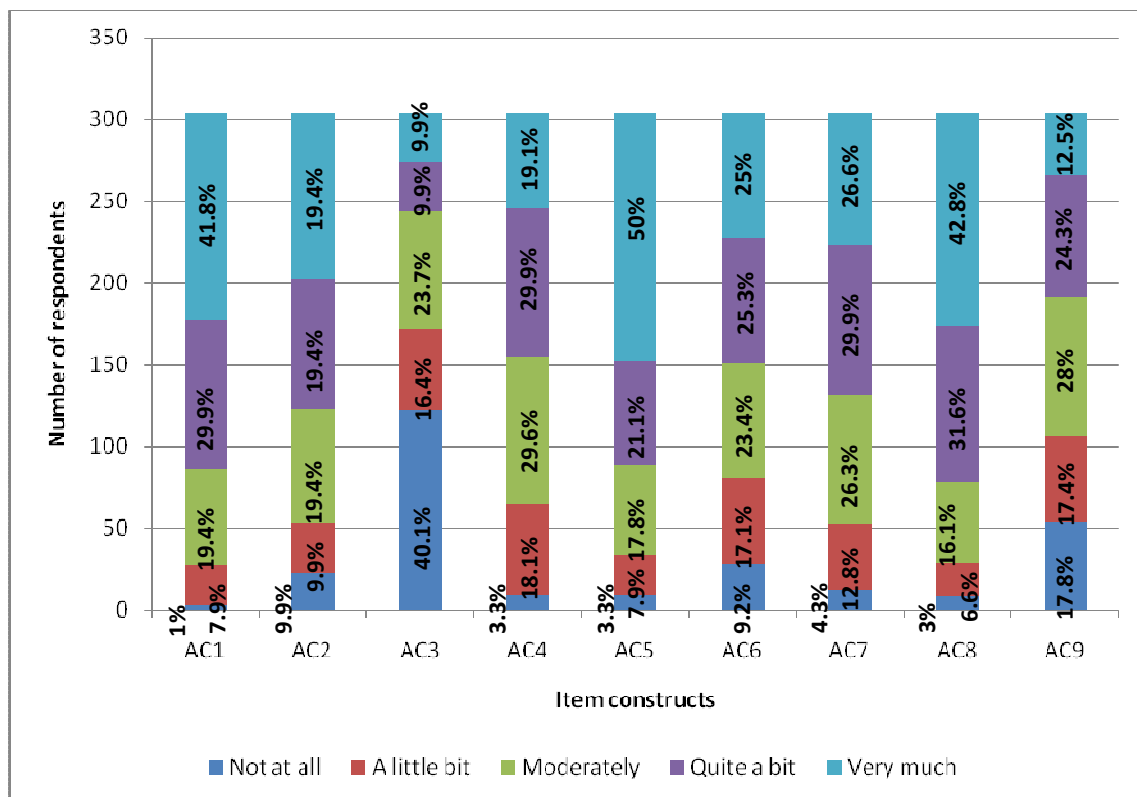
The abridged nine-item version of the Organisational Commitment Questionnaire (OCQ) was used to measure AC (Mowday et al. 1979; Porter et al. 1974b). In past studies, the scale is considered internally consistent in cases where the Cronbach alpha coefficient falls between .82 and .93 (Meyer and Allen 1991; Porter et al. 1974b). Hence, the scale is internally consistent and reliable also in this study as the Cronbach alpha (α) coefficient obtained for the scale was .832. A breakdown of respondents' responses is presented in Table 41, AC1 was used to assess employees' willingness to put in a great deal of effort beyond that which is normally expected. Out of the 304 respondents, 127 respondents marked very much, 91 marked quite a bit, 59 marked moderately, 24 marked a little bit and only 3 marked not at all. AC2 was used to identify whether employees talk up their organisations to their friends as great organisations to work for. 101 respondents marked very much, 80 respondents marked quite a bit, 70 respondents marked moderately, 30 respondents marked a little bit and 23 respondents marked not at all.

AC3 was used to observe if employees accept almost any type of job assignment in order to keep working for their organisations. 40.1% answered not at all, 16.4% selected a little bit and 23.7% marked moderately. The proportion of those that marked quite a bit and very much was both 9.9%. AC4 was used to make out whether respondents find their (personal) values and their organisations' values very similar. 19.1% suggested that their personal values are very similar with their organisations' values. 29.6% selected moderately, 3.3% selected not at all, 29.9% selected quite a bit and 18.1% selected a little bit. The fifth item on the scale, that is AC5, was used to evaluate how proud employees' are to tell their friends that they are part of their organisations. 64 respondents marked quite a bit and 152 respondents (which represent half of the total respondents) marked very much. However, 10 respondents marked not at all, 24 marked a little bit and 54 respondents marked moderately.

AC6 was used to measure the extent to which their organisations inspire them to be the best. 130 respondents selected very much, 76 respondents chose quite a bit, 77

respondents selected quite a bit and 71 respondents selected moderately. 28 respondents chose not at all and 52 respondents chose a little bit. AC7 was used to evaluate whether employees are glad that they chose to work for their organisations. 13 respondents marked not at all, 39 respondents said a little bit, 80 respondents chose moderately, 91 respondents are quite glad and 81 respondents very much glad that they chose to work for their working over others they were considering at the time they joined. The eighth construct was used to assess employees' concern about the fate of their organisations. 130 respondents marked very much, 96 marked quite a bit, 49 marked moderately, 20 marked a little bit and 9 marked not at all. The final construct (AC9) was used to assess whether employees think their organisations were the best possible organisations for which they could work. Respondents' replies were as follows: 54 respondents marked not at all, 53 respondents marked a little bit, 85 respondents marked moderately, 74 respondents marked quite a bit and 38 marked very much.

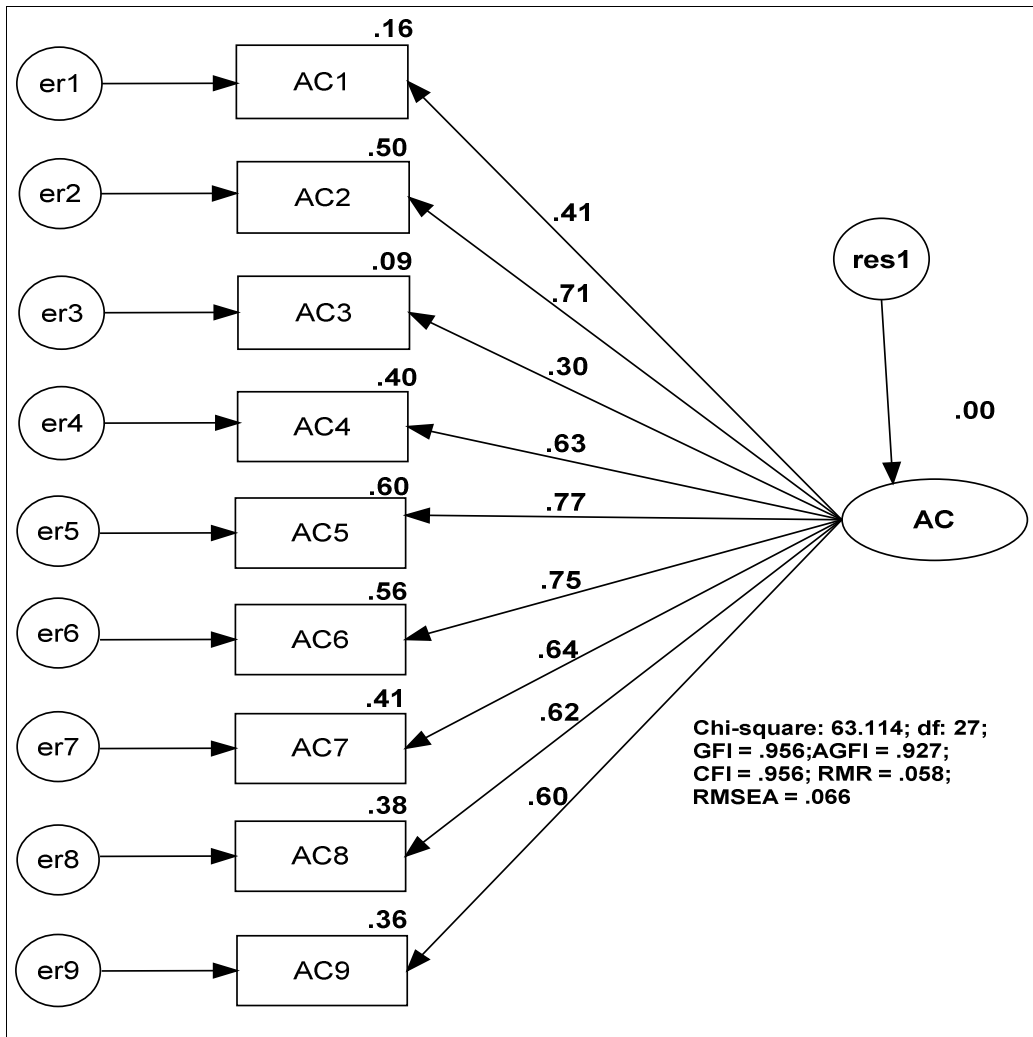
Table 41: Respondents' responses in relation to AC



Factor analysis and confirmatory factor analysis for affective commitment

Only one factor, affective commitment (AC), could be extracted, and the solution could not be rotated. In other words, all the 9 items converged under affective commitment when the PCA was performed. The factor accounts for 44.58% of the total variance of affective commitment. Below in Figure 33, the results of the confirmatory analysis of AC model fit are presented. It indicates that it is of perfect fit. The extent to which employees' are proud of their organisations, increases the most when employees' affective commitment increase.

Figure 33: Confirmatory analysis for AC



Validating research hypothesis 4

Hypothesis 4 states that PCB, EC, EL and AC have a significant influence on employees' readiness to support organisation-wide changes (ERSC). The results suggest that PCB, EC, EL and AC correlate positively with ERSC. As shown in Table 42, EC was found to have major influence on AC (at a significant value of $p < 0.01$ for a 2-tailed tests). In addition, PCB correlates notably with EC; which suggests that an attempt to make employees favourably disposed towards organisation-wide changes can be achieved by ensuring that the communication system in organisation is effective. At a 95% confidence level for a 2-tailed test, AC is evidently associated with EL. Finally, at a significant value of $p < 0.01$ for a 2-tailed tests, ERSC was found to show significant associations with AC, EC, PCB and EL.

Table 42: Correlation results among ERSC, AC, EC, PCB and EL

	ERSC	AC	EC	PCB	EL
ERSC	1	.185**	.311**	.351**	.463**
AC	.185**	1	.192**	.199**	.143*

** Correlation is significant at the 0.01 level (2-tailed).

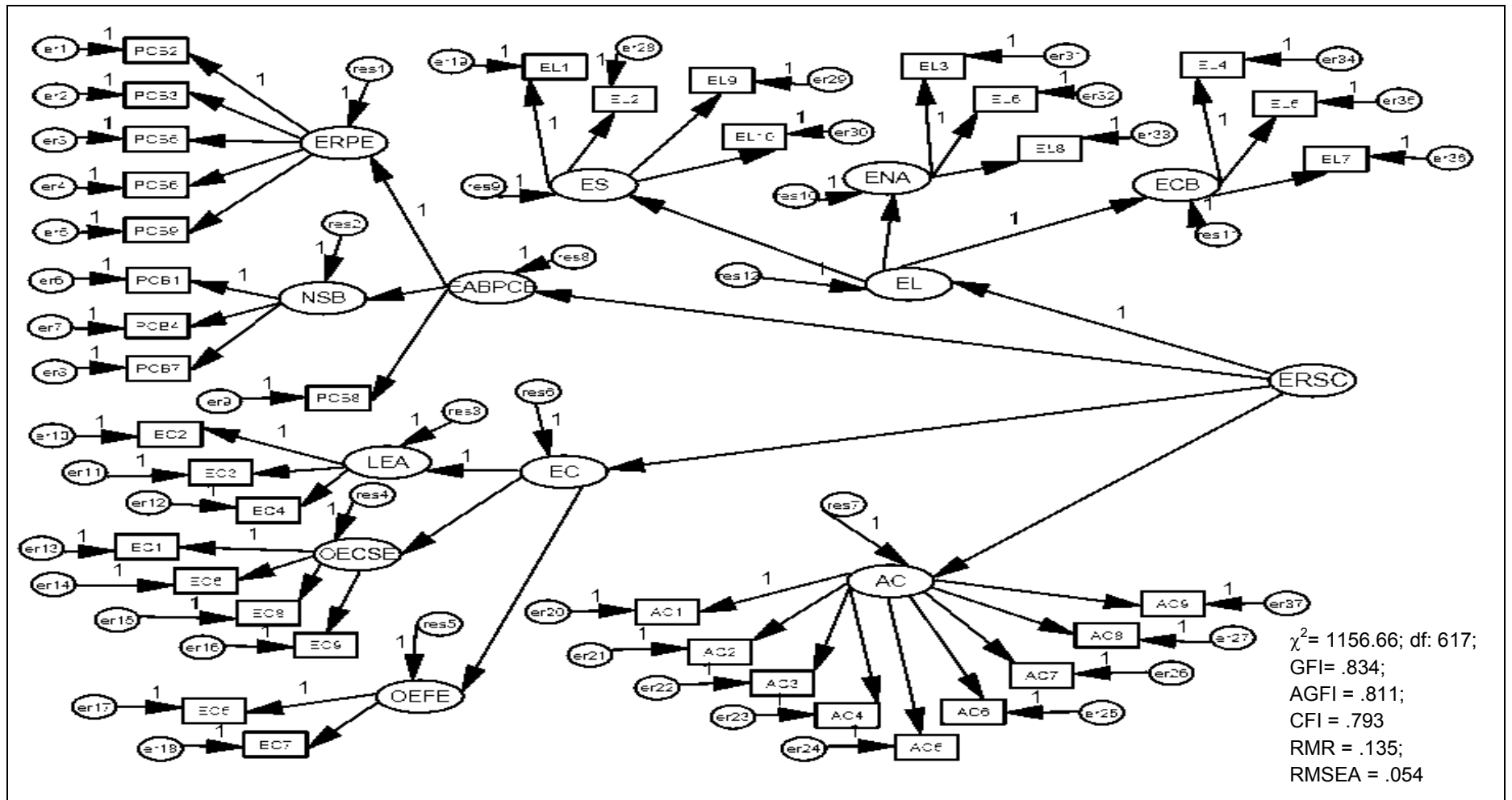
* Correlation is significant at the 0.05 level (2-tailed).

AMOS 18.0 was used to further explain the relational meanings of the significance of the relationships established among these research themes (that is, among PCB, EC, EL and AC) in relation to ERSC. The maximum likelihood ratio obtained was below the recommended value of 3. Presented in Table 43 is a summary of results showing both the direct and indirect effects of ERSC on PCB, EC, EL, AC, ERPE, NSB, PCB8, LEA, OECSE, OEFE, ES, ENA supposing the standard deviation of ERSC is increased by 1. It is significant to note that as ERSC increases, ERPE, NSB and PCB8 will decrease. These relationships are presented diagrammatically in Figure 34.

Table 43: Effects of ERSC on its associating research themes and scales

	Direct effect of ERSC on	Indirect effect of ERSC on
PCB	.68	.00
EC	.76	.00
EL	.25	.00
AC	.94	.00
ERPE	.00	-.40
NSB	.00	-.42
PCB8	.00	-.49
LEA	.00	.68
OECSE	.00	.65
OEFE	.00	.55
ES	.00	.05
ENA	.00	.20
ECB	.00	.23

Figure 34: Confirmatory factor analysis for ERSC



5.2.2 Organisational Adaptive Capacity (OAC)

The scale used to evaluate OAC consisted of 28 items. The 28-item scale was further subdivided into three scales as follows: 7 items were used to evaluate the presence of Learning Culture (LC) in respondents' organisations, 11 items were used to appraise Leadership Style and Quality (LSQ) in respondents' organisations and the remaining 10 items were used to measure Availability of Resources (AR). Employees were asked to circle the answer that best matches how true the 28 items best matches what actually exists in their organisations. A summary of respondents' responses to each of the 28 items is presented in the next sub-section.

5.2.2.1 Learning Culture (LC)

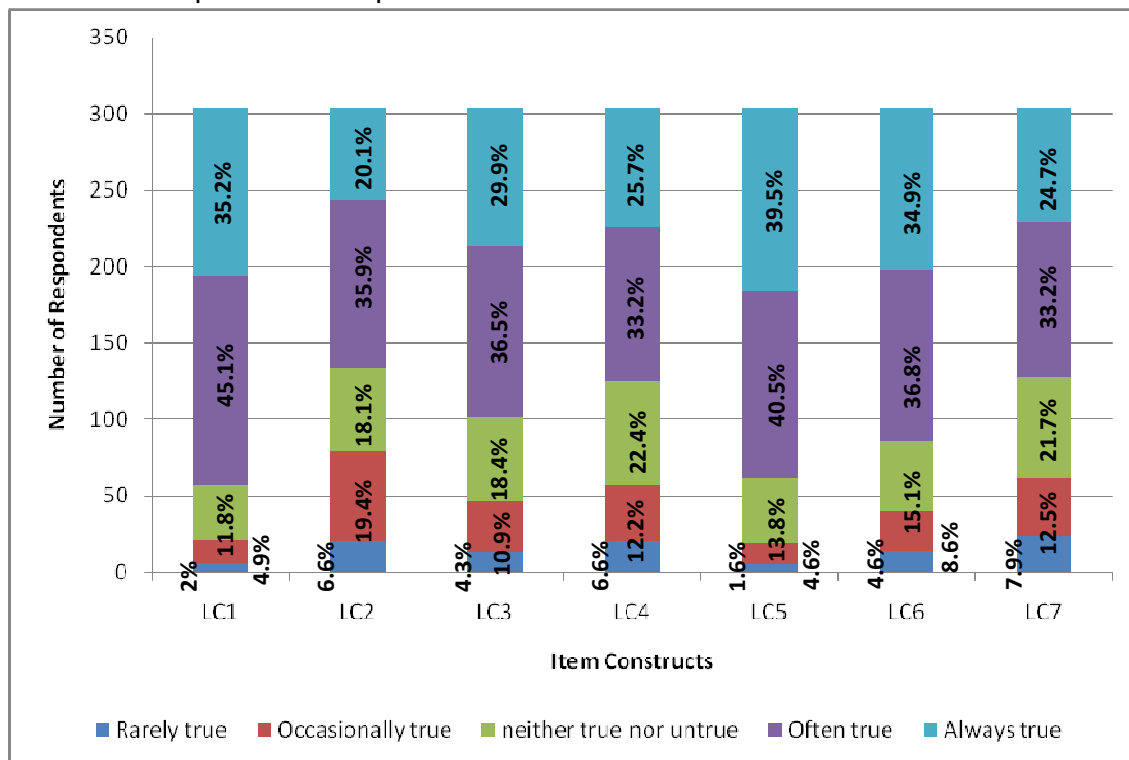
The obtained Cronbach alpha (α) coefficient for the learning culture scale was 0.809; thus affirming that the scale was dependable. Respondents' responses are presented in Table 44. The first item, LC1, was used to ascertain whether respondents' organisations create a working environment that enables employees to be open and willing to learn from one another in their respective organisations. 110 respondents marked always true, 137 respondents marked often true, 36 respondents answered neither true nor untrue, 15 respondents marked occasionally true and 6 respondents indicated it was rarely true. The second item, LC2, was used to assess whether employees' organisations provide them access to opportunities that will assist them to develop skills needed to do their work. 109 respondents marked often true, 61 marked always true, 20 respondents marked rarely true, 59 respondents marked and 36 respondents marked neither true nor untrue.

The third item, LC3, was used to acknowledge whether individuals are encouraged by their employees to explore new ways of solving problems. 111 respondents selected often true, 91 chose always true, 56 selected neither true nor untrue, 33 responded occasionally true and 13 indicated that their organisations rarely encourage them to explore new ways of solving problems. LC4 was used to assess if respondents' organisations train their employees on how to cope with work challenges. 20 respondents marked rarely true, 37 marked occasionally true, 68 chose neither true nor untrue, 101 went for often true and 78 respondents chose

always true. The fifth item, LC5, was used to investigate whether managers provide their employees adequate support and required tools to do their work. 120 respondents chose always true, 123 respondents chose often true, 42 respondents selected neither true nor untrue, 14 respondents selected occasionally true and 5 respondents chose rarely true.

The sixth item, LC6, was used to evaluate whether individuals are coached to do the right things. 106 respondents responded always true, 112 respondents often true marked 46, 26 respondents marked occasionally true, 46 respondents marked neither true nor untrue, 112 respondents selected often true and 106 respondents marked always true. The last item (LC7) on the scale was used to identify whether employees are trained on how to manage risks by their organisation. 75 respondents said employees it was always true, 101 respondents said it was often true, 46 marked neither true nor untrue, 38 respondents responded occasionally true and 24 respondents marked rarely true.

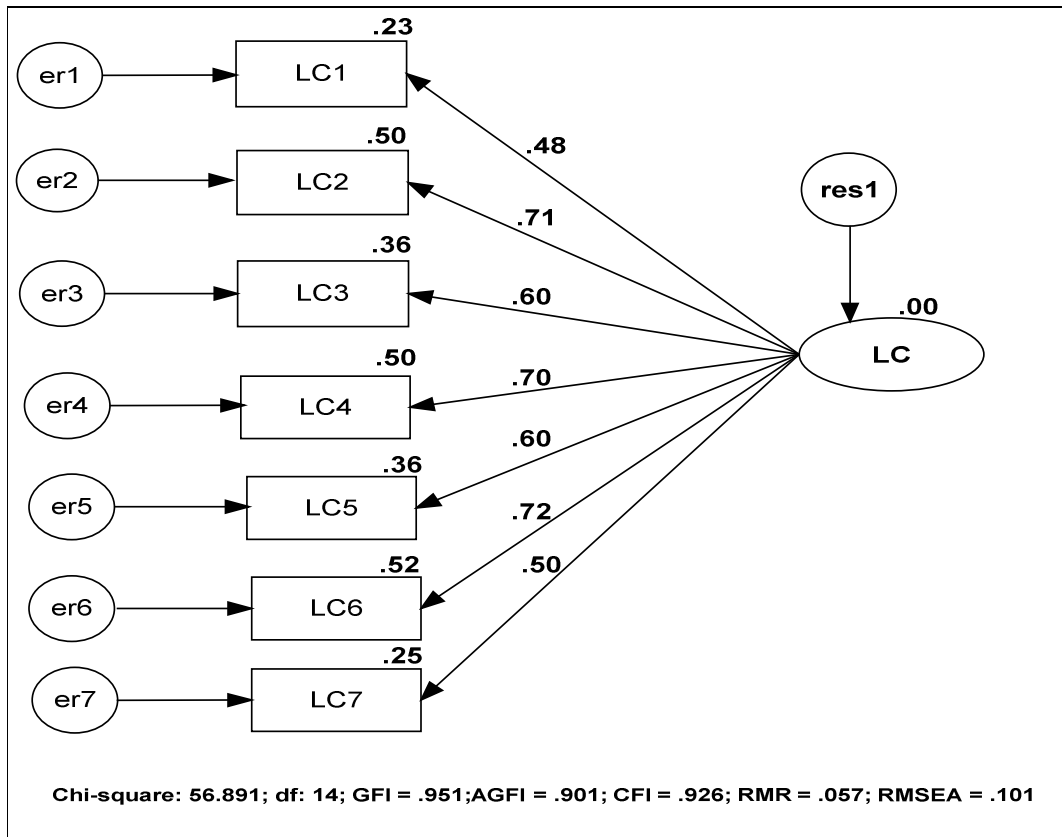
Table 44: Respondents' responses in relation to LC



Factor analysis and confirmatory factor analysis for LC

The Principal Component Analysis could only extract one factor and the solution could not be rotated. Just like affective commitment, all the items used to assess learning culture in case study organisations converged under this one factor. From the factor analysis results, the factor was found to explain accounts for 47.14% of the total variance of learning culture (LC) in organisations. The Kaiser-Meyer-Olkin (KMO) value of .832 and the Bartlett's Test for Sphericity was significant (at a significant value of $p < 0.0001$ for a 2-tailed test). Below in Figure 35, the results of the confirmatory analysis of AC model fit are presented. It indicates that it is of suitable fit. From the figure, it can be deduced that the fact that employees' are coached to do the right things in organisations is highly an indication of the existence of learning culture in organisations.

Figure 35: Confirmatory factor analysis for LC



5.2.2.2 Leadership Style and Quality (LSQ)

The Cronbach alpha (α) coefficient was .814 for the scale used to assess leadership style and quality. Respondents' responses are presented in Table 45. LSQ1 was used to assess whether respondents' managers normally deliver on commitments. None of the respondents marked rarely true. 31 of them marked occasionally true, 88 marked neither true nor untrue, 142 marked often true and 43 marked always true. Respondents' answers to LSQ2, which was used to assess the ability of senior staff in their respective organisations been able to fulfil promises (i.e. LSQ2), are thus: rarely true – 1%, occasionally true – 7.9%, neither true nor untrue – 29.6%, often true – 47.4% and always true – 14.1%.

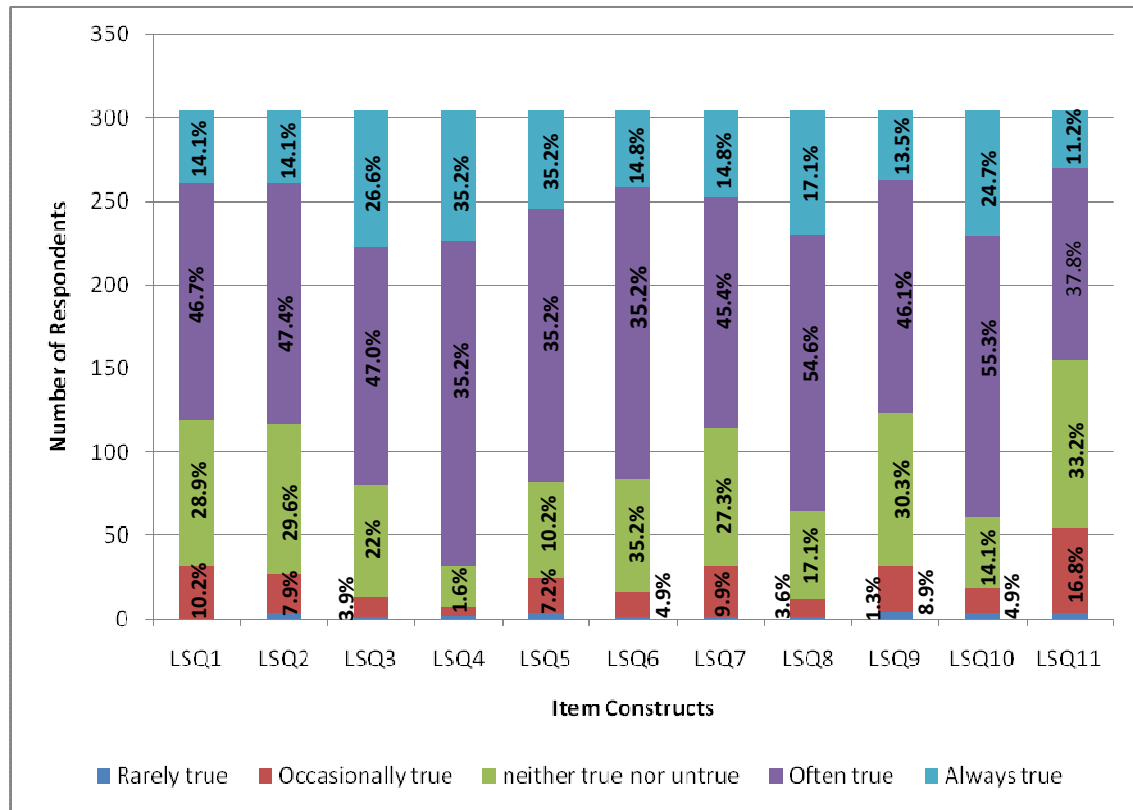
LSQ3 was used to evaluate whether respondents consider their managers to be trustworthy person. Only 1 respondent indicated that it is rarely true that his/her manager is a trustworthy person. 5 respondents suggested that their managers are occasionally trustworthy. 25 respondents neither said it was true nor untrue. 194 respondents marked often true and 78 marked always true. LSQ4 was used to appraise whether employees know what is expected of them in their everyday work. 2 respondents indicated rarely, 5 respondents stated occasionally, 24 respondents marked neither true nor untrue, 194 respondents indicated that it was often true and 78 respondents said it was always true.

LSQ5 was used to consider whether employees' typical work entails collaboration. 3 respondents indicated this was rarely true, 22 respondents said it was occasionally true that their work entail a lot of collaboration, 57 respondents said it was neither true nor untrue, 164 respondents said it was often true and 58 ticked always true. LSQ6 was used to evaluate whether everyone had clearly defined roles in their respective organisations. Only 1 respondent stated that he/she rarely had clearly defined roles. 15 respondents said it was occasionally true that they had clearly defined roles. 68 respondents neither admitted if it was true or untrue, 175 respondents declared that it was often true and 45 respondents marked always true.

In relation to LSQ7, only 1 respondent marked rarely true. 30 respondents indicated that it was occasionally true that their managers are more focussed on achieving corporate goals than personal goals. 30 respondents marked occasionally true, 83 respondents marked neither true nor untrue. 138 respondents suggested that it was true while 53 respondents went for the always true option. The eighth construct, LSQ8, was used to assess the extent to which managers in respondents' organisations foster teamwork. Again, only 1 respondent marked rarely true, 11 persons marked occasionally true, 52 selected neither agreed nor disagreed, 166 chose often true and 74 expressed that their managers always encourage teamwork.

LSQ9 was used to identify the extent to which managers' make substantial contributions towards helping their subordinates achieve their personal goals. 4 respondents selected rarely, 27 selected occasionally true, 92 selected neither true nor untrue, 140 selected often true and 41 respondents selected always true. The tenth and eleventh item constructs (i.e. LSQ10 and LSQ11) were used to assess the extent to which individuals in teams share the same sense of purpose and how quickly respondents' managers resolve employees' dissatisfaction respectively. As regards LSQ10, 3 respondents marked rarely true, 15 respondents marked occasionally true, 43 respondents answered neither true nor untrue, 168 respondents marked often true and 75 respondents ticked always true. As per LSQ11, 3 persons suggested rarely quickly, 51 respondents suggested occasionally true, 101 respondents answered neither quickly nor belatedly, 115 said often quickly while 34 respondents chose always quickly.

Table 45: Respondents' responses in relation to LSQ



Factor analysis for leadership style and quality

Two factors, Belief in leadership (BL) and Delegation of Responsibilities (DR) were extracted. Both factors had eigenvalues greater than 1, and both accounted for 47.13% of the total variance of LSQ. The KMO value was .859 and the the Barlett's Test of Sphericity was significant (at significant value of $p < 0.0001$ for a 2-tailed test). Although, LSQ8 and LSQ 10 converged under both factors, the factors converged more significantly under Delegation of Responsibilities (DR). Therefore, 5 items (namely LSQ1, LSQ2, LSQ3, LSQ9 and LSQ11) converged under Belief in leadership (BL) while the remaining 6 items converged Delegation of Responsibilities (DR); that is, LSQ4, LSQ5, LSQ6, LSQ7, LSQ8 and LSQ10 converged under factor 2. This can be seen in Table 46.

Table 46: Rotated Component Matrix^a for LSQ

	Component	
	1 (Belief in Leadership, BL)	2 (Delegation of Responsibilities, DR)
LSQ1	.785	
LSQ2	.641	
LSQ3	.796	
LSQ9	.518	
LSQ11	.616	
LSQ4		.762
LSQ5		.639
LSQ6		.510
LSQ7		.423
LSQ8	.436	.577
LSQ10	.542	.550
KMO = .859; Barlett's Test of Sphericity (chi square: 826.911; df:55) = 0.000		

Extraction Method: Principal Component Analysis.

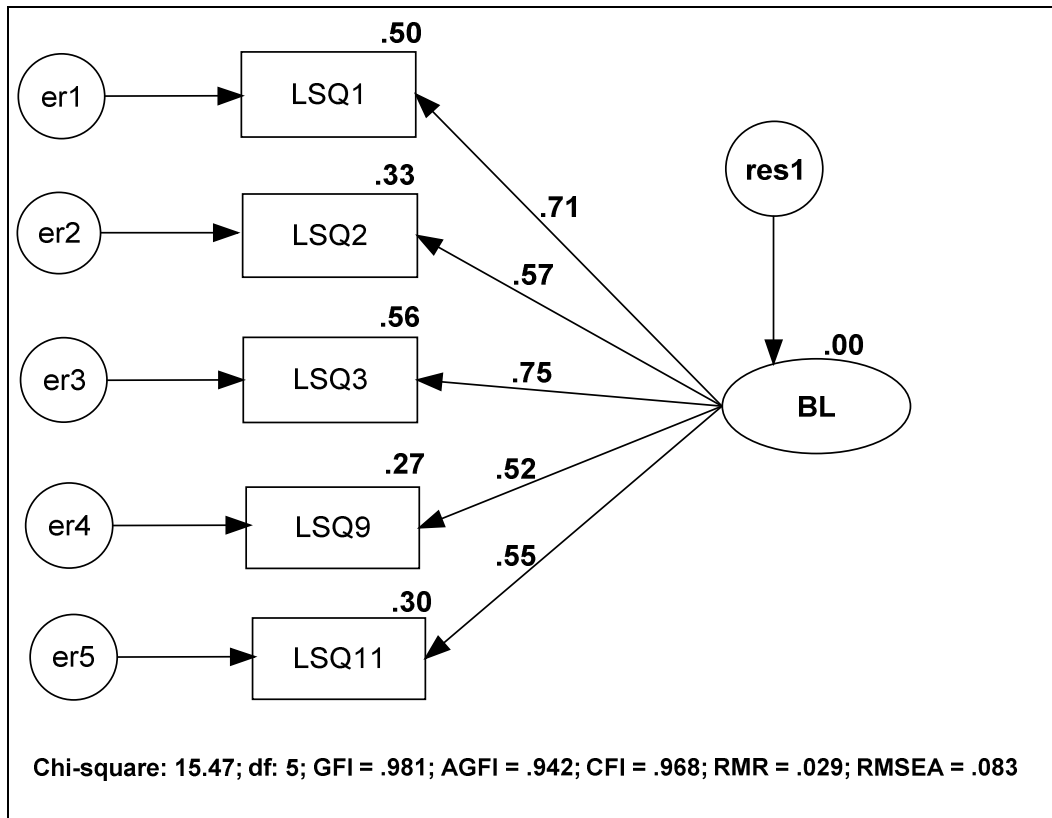
Rotation Method: Varimax with Kaiser Normalisation.

a. Rotation converged in 3 iterations.

Confirmatory factor analyses of the varimax rotated factors

The confirmatory factor analysis (CFA) for belief in leadership is shown in Figure 36 on the next page. The results of the goodness of fit were as follows: GFI = .981, AGFI = .942, CFI = .968, RMR = .029 and RMSEA = .083. These results suggest that the 5-item constructs can perfectly explain some of the noted variances in BL. All of the 5 items correlated positively with BL. LSQ3 correlates the highest with BL; thus suggesting that the as employees' trust their managers increases, their conviction and confidence in their managers will also increase. LSQ9 correlates the lowest with employees' belief in leadership, out of the 5 items.

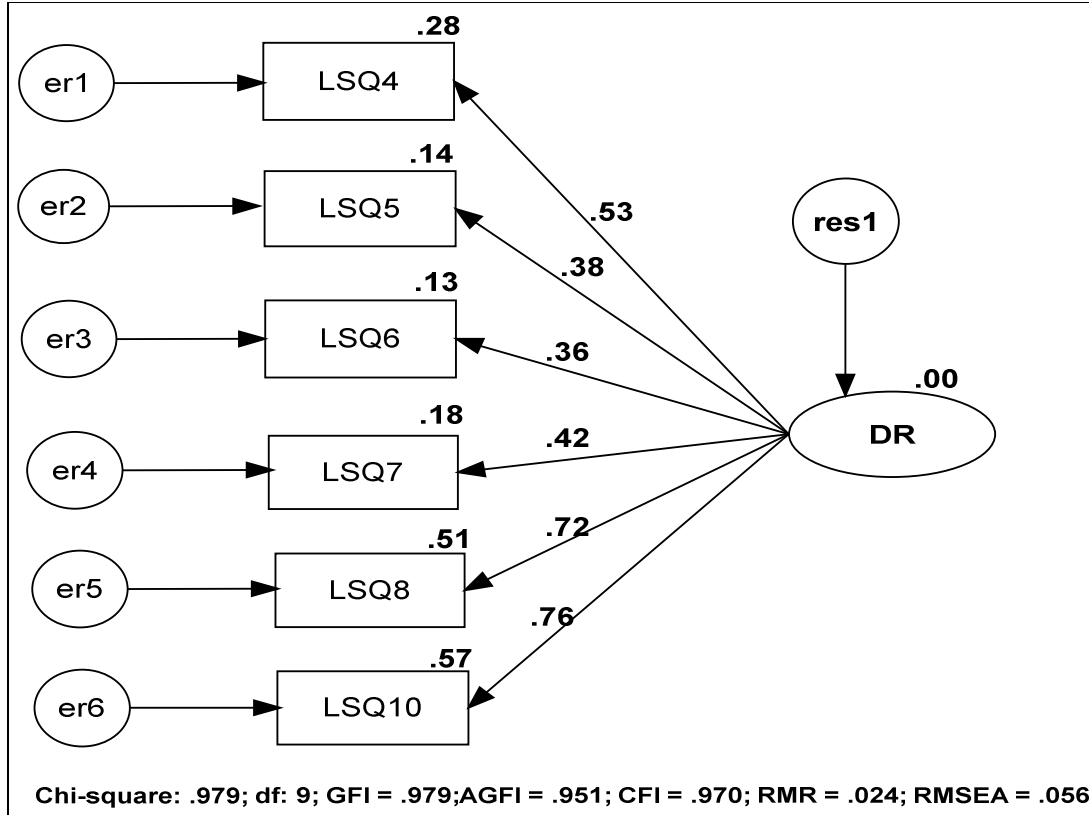
Figure 36: Confirmatory factor analysis for BL



Confirmatory factor analysis for the second factor, DR, also revealed that the 6 items would sufficiently explain the observable variance in the manner in which managers delegate responsibilities in their organisations; GFI = .979, AGFI = .951, CFI = .970, RMR = .024 and RMSEA = .056. The model is presented in Figure 37. All of the 6 items correlated positively with DR. LSQ8 and LSQ11 both correlated greatly with DR. This could imply that managers' ability to ensure their subordinates have the same sense of purpose, while at the same time encouraging teamwork amongst them would to significant extent improve the level of collaboration and cooperative work done by their subordinates. LSQ4 correlated higher than both LSQ5 and LSQ6. Hence, it can be inferred that employees' increased consciousness and clarity of what is expected of them in the jobs they perform is more indicative of well delegated

responsibilities than employees' work involving collaboration or having distinct job functions (and/or positions).

Figure 37: Confirmatory factor analysis of DR



5.2.2.3 Availability of Resources (AR)

The Cronbach's alpha (α) coefficient was .713, indicating that the scale was reliable. A breakdown of the frequency of respondents' responses in relation to each of the 10-items is presented in Table 47. AR1 was used to assess how employees would perform better if they had access to all the resources they need to work properly. From the responses, it can be seen 94 respondents answered that they would always perform better when they have access to all the resources they need. 157 respondents said that they would often perform better; 46 respondents indicated that it was neither true nor untrue; 5 respondents said that they will occasionally perform

better and 2 respondents admitted that they will rarely perform better even if they have all the resources they need to work with.

AR2 measured managers' effort towards providing their employees with the right tools and skills for doing their jobs. None of the respondents indicated that their managers hardly ever provide them with the right tools needed to do their work. None of the respondents marked rarely true. 32 respondents answered occasionally; 89 respondents marked neither true nor untrue; 142 and 41 responded ticked often true and always true – hence indicating that their managers often provide them with the necessary tools and skills they required. In relation to AR3, 42 respondents suggested that it was always true that senior staffs in their organisations provide them with required trainings they need to do their work. 145 respondents that it was often true and 23 respondents indicated it was occasional true. 3 respondents marked rarely true and 91 marked neither true nor untrue.

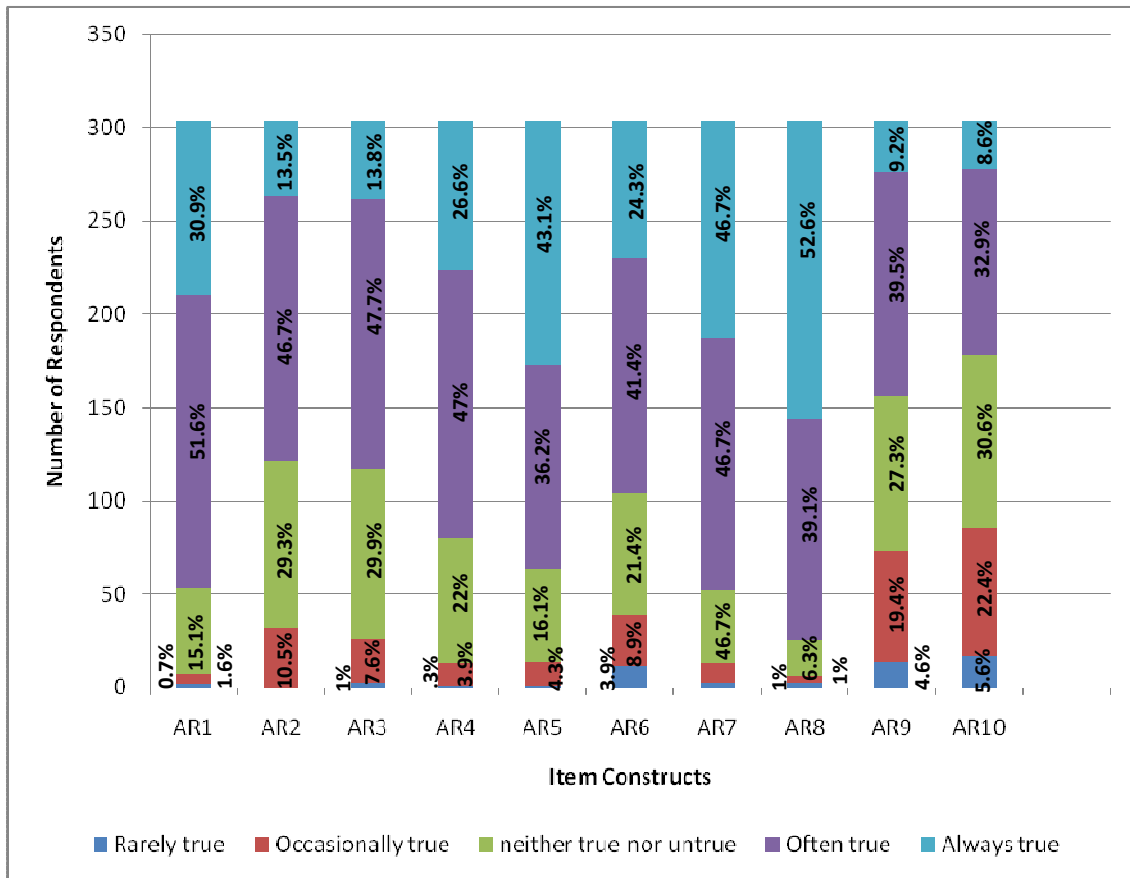
As per AR4, less than 1% of the respondents suggested that it was rarely true that they have equal opportunities to use the available resources that they need to work. 3.9% replied that it was occasionally true, 67 respondents' response suggested it was neither true nor untrue, 143 respondents said it was often true and 81 respondents identified that it was always true that they have equal opportunities opportunity to access the right tools they need to work in their organisations. Regarding AR5, still less than 1% of the respondents indicated that they it was rarely true that consistency pays off even if they work with the right tools. 4.3% of the respondents said it does pay off occasionally; 16.1% of the respondents neither said it was true nor untrue, 36.2% of the respondents said consistency often pays off when working with the right tools and 43.1% of the respondents replied that consistency always pays off.

The level of assurance that employees' can successfully complete their assigned ongoing tasks if provided with the right tools was assessed with AR6. 12 respondents ticked rarely true, 27 respondents ticked occasionally true, 65 respondents ticked neither true nor untrue, 126 respondents ticked often and 74

respondents implied that teams in their organisations would always be able to complete all their ongoing tasks once they have the right tools to work with. Managers' utmost concern that their subordinates have the right resources to work with and the assumption that employees' will perform better in their assigned roles were evaluated using AR7 and AR8 respectively.

3 respondents ticked rarely true in both cases (i.e. AR7 and AR8), 10 respondents ticked occasionally true in response to AR7 while 3 respondents ticked in response to AR8. 39 respondents ticked neither true nor untrue in relation to AR7 while 19 respondents ticked in relation to AR8. 135 respondents selected often true in relation to AR7 and 119 respondents selected often true AR8. In relation to AR7 and AR8 respectively, 117 respondents and 160 respondents picked always true. Respondents were asked if they are free to choose the resources that they feel they need best to do their work, using was AR9, 14, 59, 83, 120 and 28 respondents correspondingly responded rarely true, occasionally true, neither true nor untrue, often true and always true. The final item was used to identify whether people's skills are well-matched to their work. 17, 68, 93, 100 and 26 respondents respectively ticked rarely true, occasionally true, neither true nor untrue, often true and always true.

Table 47: Respondents' Responses in relation to AR



Factor analysis for availability of resources

The factor analysis for availability of resources produced a Kaiser-Meyer-Olkin (KMO) value of .762 and the Bartlett's Test for Sphericity was significant (at a significant value of $p < 0.0001$ for a 2-tailed test). Three factors with eigenvalues greater than 1 were extracted. All the three factors account for 53.50% of the total variation. As it can be seen in Table 48, results from the rotated component matrix for availability of resources show that: (a) four constructs, namely AR2, AR3, AR4 and AR6, converged under factor 1 – access to resources (ACR); (b) AR1, AR5, AR7 and AR8 converged under benefits of resources (BR); and (c) the remaining two item constructs (that is, AR9 and AR10) fell under fair allocation of resources (FAR).

Table 48: Rotated Component Matrix^a for AR

	Component		
	1	2	3
	Access to resources (ACR)	Benefits of resources (BR)	Fair allocation of resources (FAR)
AR2	.777		
AR3	.707		
AR4	.832		
AR6	.625		
AR1		.619	
AR5		.659	
AR7		.477	
AR8		.726	
AR9			.772
AR10			.761
KMO = .762; Barlett's Test of Sphericity (chi square: 496.847; df:45) = 0.000			

Extraction Method: Principal Component Analysis.

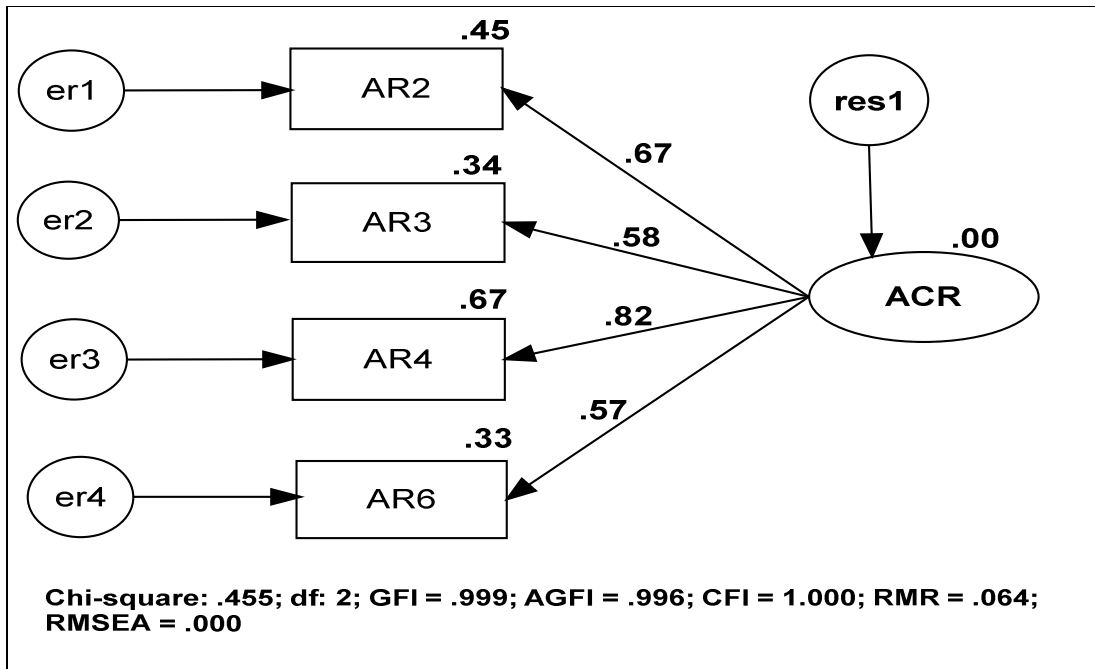
Rotation Method: Varimax with Kaiser Normalisation.

a. Rotation converged in 3 iterations.

Confirmatory factor analysis of the varimax rotated factors

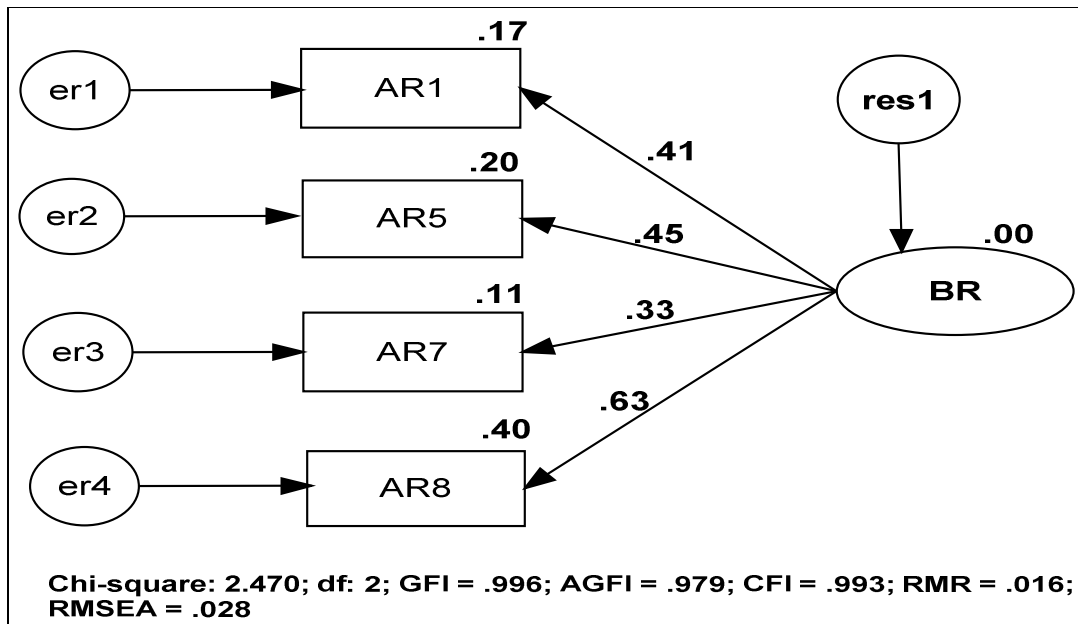
The results of the confirmatory factor analysis for the employees' access to resources (ACR) concerning typical organisation-wide changes are presented in Figure 38. The obtained measures of model-fit were perfect. AR4 showed the highest correlation with access to resources (AR) in the case organisations. This suggests that the more employees' perceive that they have equal opportunity to use available resources that they need to do their work, the more they indicate that they have access to available resources in their organisations. Managers ability to ensure that their subordinates have the required tools and skills for doing their jobs (i.e. AR2) had the second highest correlation with employees' conviction that they have access to resources in their organisation. AR6 had the least correlation out of the four constructs.

Figure 38: Confirmatory factor analysis for ACR



Confirmatory factor analysis was also performed for the second factor; which as explained earlier was the benefits that employees would derive if given the needed resources (BR). The results are presented in Figure 39. From the results, it shows that the model fitted suitably. The association is positive; that is BR correlates positively with: (a) employees' ability to perform better (AR1); (b) consistency paying off (AR5); (c) managers concern as to ensure employees have the right tools to work with (AR7), and (d) employees' ability to perform assigned roles (AR8). AR8 correlated highest with BR – thus implying that the greatest influence and benefits of having the appropriate resources would be that employees would be able to perform their assigned roles.

Figure 39: Confirmatory analysis for BR



Assessing the correlation among LC, LSQ and AV

The existence of a learning culture (LC) and leadership style and quality (LSQ) were found to be unrelated. Likewise, the existence of a learning culture (LC) in organisations was unconnected with availability of resources (AR). This suggests that existence of learning culture (LC) in organisations is not necessarily dependent on leadership quality and style, and availability of resources. However, leadership style and quality (LSQ) correlated significantly with availability of resources (AV) as shown in Table 49 below.

Table 49: Correlation results among LC, LSQ and AV

	LC	LSQ	AR
LC	1	.088	.083
LSQ	.088	1	.380**
AR	.083	.380**	1

** Correlation is significant at the 0.01 level (2-tailed).

5.2.3 Provision and Use of Stress Coping Mechanisms (PRIS)

The scale used to measure provision and use of stress coping consisted of 8 items. The 8 items covered two subscales; namely Provision of Individual Support (IDS) and Use of Stress Coping Mechanisms (CS). The IDS scale consists of five items and CS has 3 items. Employees were asked to circle an option that best represents the extent to which they respondents either strongly disagree, disagree, neither agree nor disagree, agree or strongly disagree with each of the 8 items. Respondents' responses to each of the 28 items are presented in the next subsection.

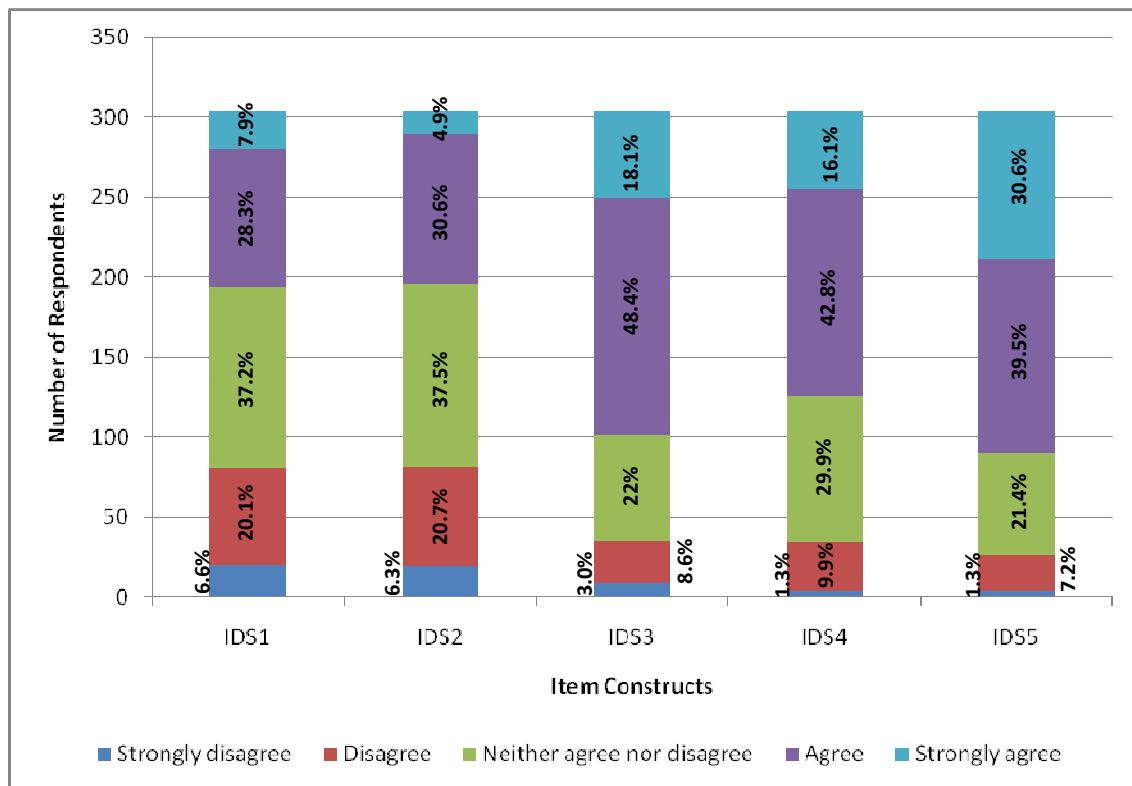
6.3.1.1 Provision of Individualised Social Support (IDS)

The Cronbach alpha (α) coefficient was .648 for the scale used to assess provision of individualised or social support (IDS). Thus, the scale is slightly reliable (Battista et al. 1986; Moss et al. 1998; Reader et al. 2007; Triemstra et al. 2010). A summary of respondents' answers to the 5-items used to assess provision of individualised or social support is presented in Table 50. IDS1, the first item construct, was used to decide whether case study organisations assist employees to solve their pending personal problems. 20 respondents strongly disagreed that their organisations help them in resolving their personal problems; 61 respondents disagreed, 113 respondents neither agreed nor disagreed, 86 respondents agreed and 24 respondents strongly agreed.

The second item construct, IDS2, was used to gauge if employees have all they need to successfully handle unpleasant occurrences at work. At least 82 respondents disagreed; that is, 19 strongly disagreed and 63 disagreed. On the other hand, 108 respondents at least agreed that they have all they need to successfully handle unpleasant occurrences at work - 93 respondents strongly agreed 114 neither agreed nor disagreed. IDS3 was used to determine whether teams work together to rectify mistakes caused by any of their team members even though they were not the cause of the mistake. 9 strongly disagreed, 26 disagreed, 67 neither agreed nor disagreed, 147 agreed and 55 strongly agreed.

IDS4 was used to evaluate whether individuals rally round their colleagues to support those in need of help. The difference between IDS3 and IDS4 is that while IDS3 is restricted to members of their team, IDS4 cuts across the whole organisation. 1.3% of the respondents selected strongly disagree, 9.9% of the respondents selected disagree, 29.9% of the respondents neither agreed nor disagreed, 42.8% agreed and 16.1% strongly agreed. The final item, IDS5, was used to assess whether employees' motivation is as a result of knowing that they have people around them to help them. Respondents were thus: 4 ticked Strongly disagree; 22 disagreed; 65 neither agree nor disagree; 120 agreed and 93 strongly agreed that they are motivated knowing that someone around them can assist them.

Table 50: Respondents' responses to provision of individualised/ social social



Factor analysis for provision of individualised/ social support

The factor analysis for IDS produced a Kaiser-Meyer-Olkin (KMO) value of .643 and the Bartlett's Test for Sphericity was significant (at a significant value of $p < 0.0001$ for a 2-tailed test). Two factors, each with corresponding eigenvalues of 2.130 (factor 1) and 1.034 (factor 2), were extracted. Both factors altogether explain 63.28% of the total variation for IDS. As it can be seen in Table 51, the first two item constructs (IDS1 and IDS2) converged under factor 1 – which was the provision of individualised support (PRIS) while the remaining three item constructs converged under provision of social support (PSS) when the extracted principal component analysis (PCA) was rotated.

Table 51: Rotated Component Matrix^a for leadership style and quality

	Component	
	1 (Provision of individualised support, PIS)	2 (Provision of social support, PSS)
IDS1	.827	
IDS2	.791	
IDS3		.693
IDS4		.582
IDS5		.734
KMO = .643; Barlett's Test of Sphericity (chi square: 256.357; df:10) = 0.000		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalisation.

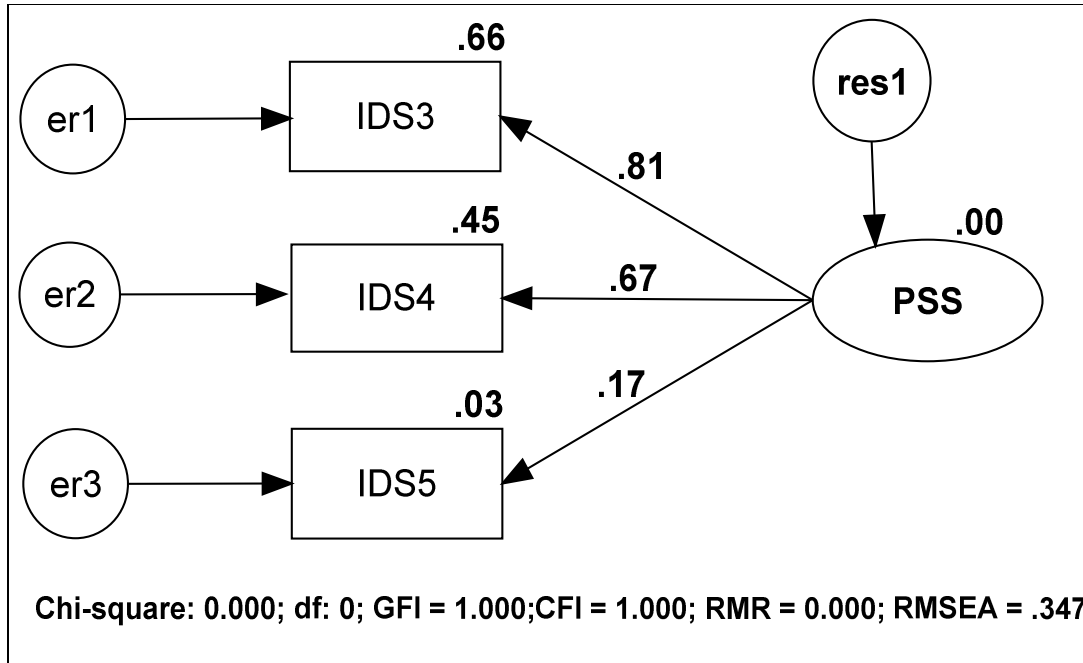
a. Rotation converged in 3 iterations.

Confirmatory factor analysis of the varimax rotated factors

The result of the confirmatory factor analysis for the provision of social support (PSS) is presented in Figure 40. The obtained measures of model-fit reveal that model is satisfactory. The three items were found to be positively correlated with PSS. IDS3

had the highest correlation with provision of social support (PSS) in the case organisations and IDS5 had the least.

Figure 40: Confirmatory factor analysis for PSS

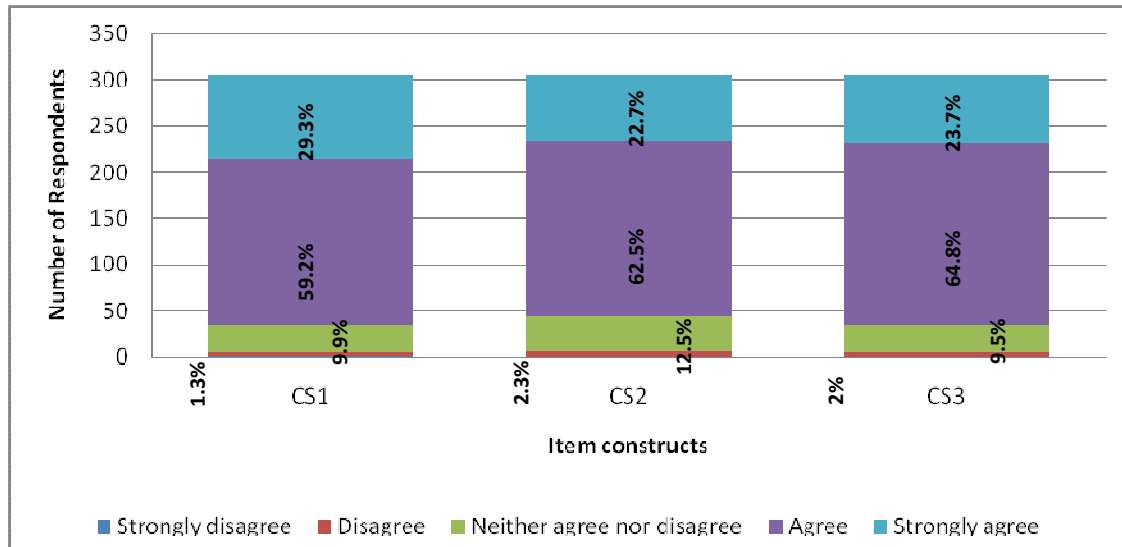


6.3.1.2 Use of Stress Coping Mechanisms

The Cronbach alpha (α) coefficient for the scale used to assess Use of Stress Coping Mechanisms (CS) was .687, which shows that the scale is slightly reliable. A breakdown of the respondents' responses to each of the 3 items is presented in Table 52. CS1, CS2 and CS3 were used to respectively assess whether employees (a) see change as an opportunity to improve themselves; (b) remember times they faced similar challenges whenever they face new challenges; and (c) have devised their own ways of dealing with challenges. For both CS2 and CS3, none of the respondents ticked strongly disagree, Only 1 respondent ticked strongly disagree for CS1. Correspondingly 4, 7 and 6 respectively ticked disagree to CS1, CS2 and CS3. 30 respondents neither agreed nor disagreed in relation to CS1, 38 neither agreed nor disagreed to CS2 and 29 respondents marked neither agree nor disagree to

CS3. This possibly suggests a majority of the respondents (a) view change as an opportunity to improve themselves, (b) use past successful experience to navigate through their present situations, and (c) have devised their own ways of dealing with challenges. 180 respondents agreed to CS1; 190 agreed to CS2 and 197 agreed to CS3. Finally, 89 respondents strongly agreed to CS1; 69 strongly agreed to CS2 and 72 strongly agreed to CS3.

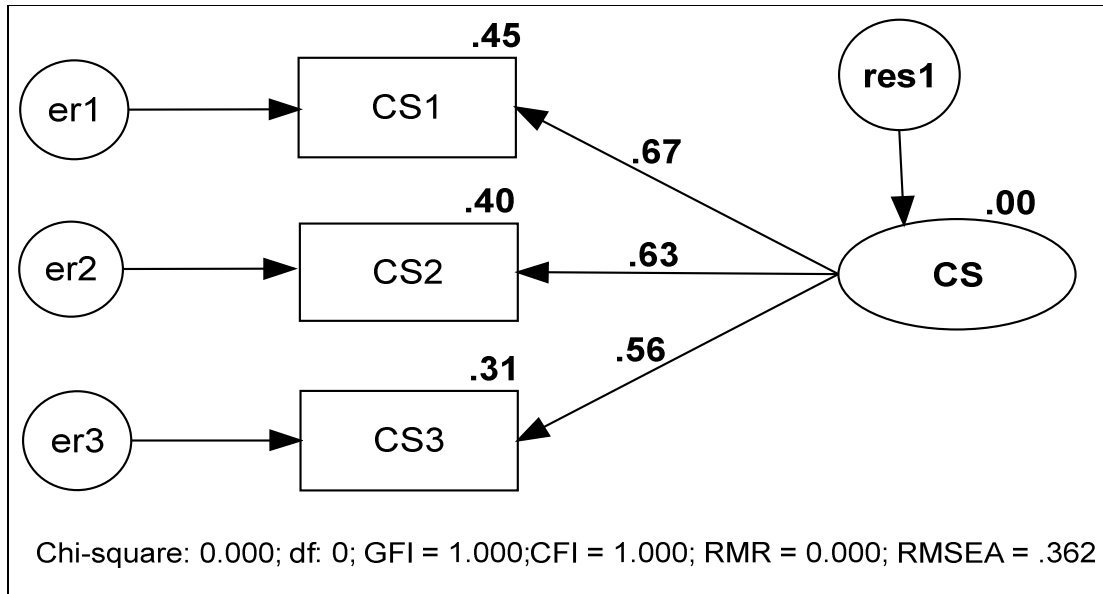
Table 52: Respondents' responses in relation to CS



Factor and confirmatory factor analysis of the varimax rotated factor

Only one factor, use of stress coping mechanisms (CS) could be extracted but the solution could not be rotated. In other words, all the 3 items converged under use of stress coping mechanisms (CS) when the Principal Component Analysis was done. The factor accounts for 58.94% of the total variance of CS. As shown in Figure 41, the results of the confirmatory analysis of CS model fit are presented. It indicates that hypothesised associations are a perfect fit. Out of the 3 items used to relate use of stress coping mechanisms (CS), the use of stress coping mechanisms is more pronounced when employees view change as an opportunity to improve themselves. OR3 had the least correlation value with use of stress coping mechanisms (CS).

Figure 41: Confirmatory factor analysis for use of stress coping mechanisms (CS)



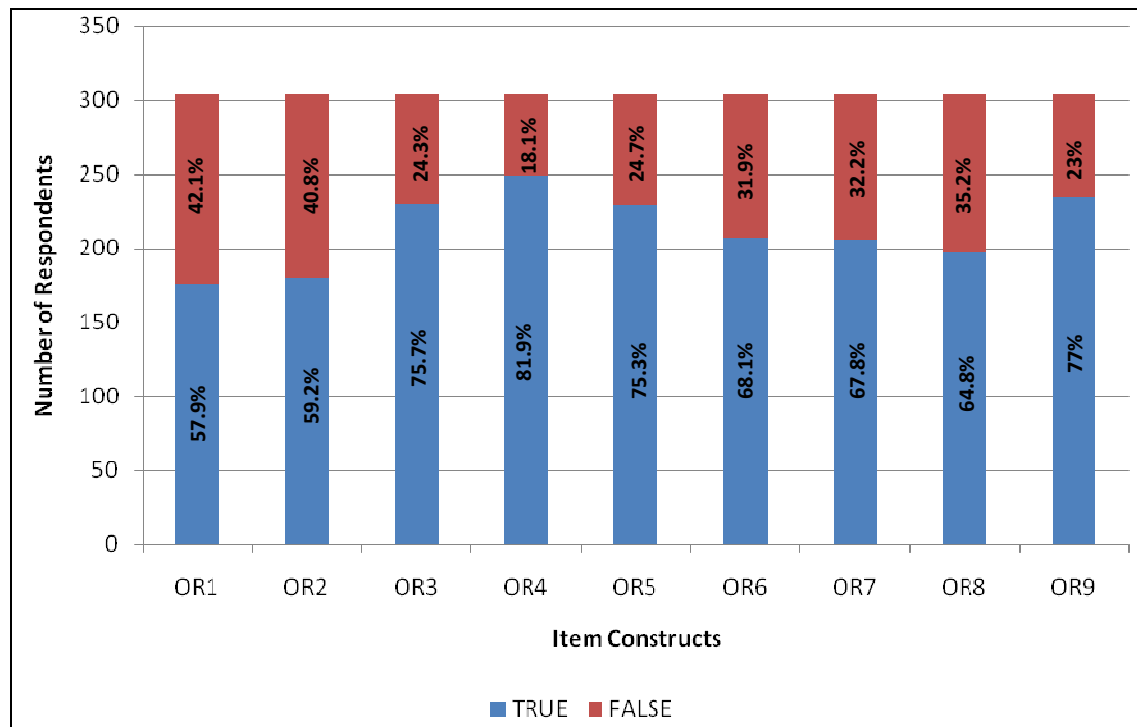
5.3.4 Organisational Resilience (OR)

The Cronbach alpha for effective communication is 0.707; thus suggesting that the scale has internal consistency and indeed measures what it is designed to assess. Respondents were asked to answer either true or false to the 9 items used. The respondents' answers are presented in Table 53. OR1 was intended to identify whether case organisations do impact assessment drills before starting a major project. 57.9% of the respondents replied yes and 42.1% responded no. The second construct, OR2, was to decide whether organisations have alternative plans for most of their jobs. 59.2% of the respondents answered in the affirmative but 40.8% said false. The third construct, OR3, was used to determine if organisations do a thorough analysis of situations before starting a task. 230 respondents said it was true and 74 respondents said it was not true.

249 respondents answered true and 55 respondents answered false to OR4; which seeks to verify if case study organisations carry out business continuity planning. 229 respondents replied yes and 75 respondents said no when asked if their organisations use a formalised approach through which economic decisions of any

kind are justified. In relation to OR6, 207 respondents said they do scenario planning and have lessons learnt reviews after projects while 97 said they do not. OR7 was used to find out whether case organisations have contingency plans for managing unexpected events; 206 respondents said yes and 98 respondents said no. When respondents were asked if they would be able to deal with whatever comes their way should a member of their team leave, 197 respondents indicated they would while 107 respondents. Lastly, OR9 was used to assess overlapping functions in case organisations – 234 respondents answered that their employees’ in their team are trained to perform each other’s job whereas 70 respondents said they are not.

Table 53: Respondents’ Responses in relation to availability of resources



Factor analysis for organisational resilience

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett’s test of Sphericity were both satisfactory (Field 2009). As shown in Table 54, the estimated KMO was .762, and the Bartlett’s Test was significant (at a sig. value of $p < 0.0001$)

for a 2 tailed test); meaning that the factor analysis would generate unique factors. The Principal Component Analysis (PCA) conducted produced two exclusive factors, each with eigenvalues exceeding 1. The first factor, impact assessment (IA) and the second factor – scenario planning (SP) – explains 31.172% and 13.691% of the total variance for organisational resilience respectively.

Table 54: Rotated Component Matrix^a for organisational resilience

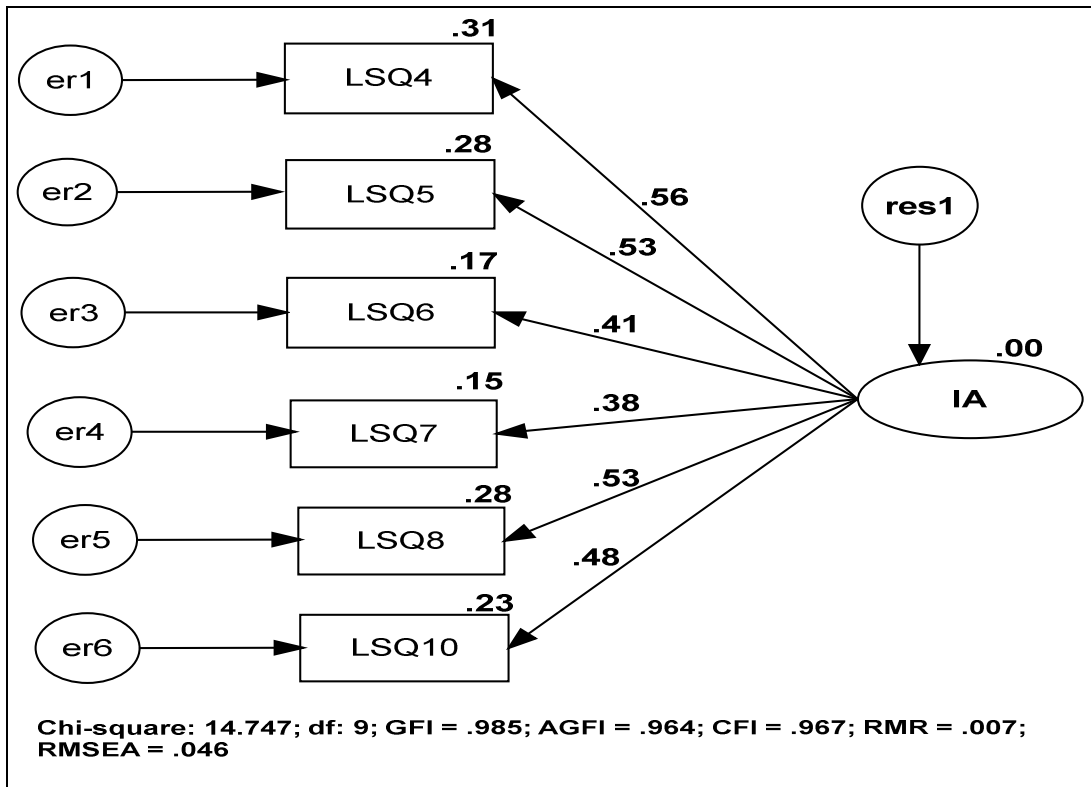
	Component	
	1 (Impact Assessment, IA)	2 (Scenario Planning, SP)
OR1	.565	
OR2	.637	
OR4	.429	
OR5	.403	
OR6	.675	
OR7	.692	
OR3		.725
OR8		.613
OR9		.817
KMO = .762; Barlett's Test of Sphericity (chi square: 429.893; df: 36) = 0.000		

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalisation.
 a. Rotation converged in 3 iterations.

Confirmatory factor analysis of the varimax rotated factors

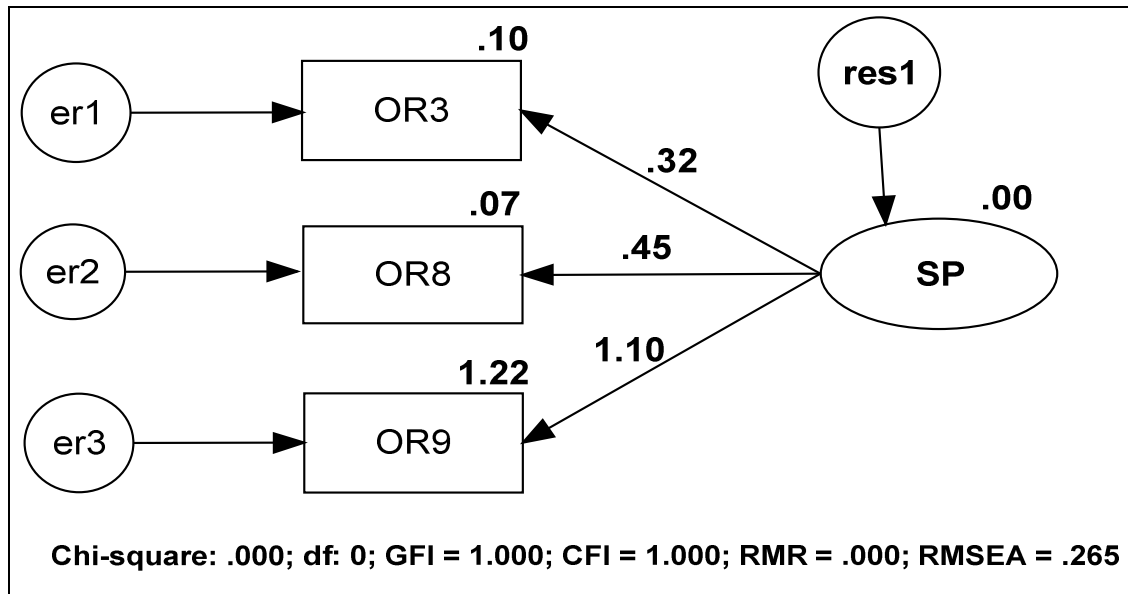
The confirmatory factor analysis (CFA) for impact assessment (IA) is shown in Figure 42 on the next page. The results of the goodness of fit were as follows: GFI = .985, AGFI = .964, CFI = .967, RMR = .007 and RMSEA = .046. These results suggest the hypothesised relationship is excellent, and in addition, that the 6-item constructs perfectly explain some of the noted variances in impact assessment (IA). All the 5 items positively correlated with Impact assessment. OR1 correlates the highest with impact assessment. OR5 correlates the lowest with impact assessment (IA).

Figure 42: Confirmatory factor analysis for impact assessment (IA)



Confirmatory factor analysis was also performed for SP. The obtained estimates of the confirmatory factor analysis for SP are presented in Figure 43. OR9 correlates highest with scenario planning (SP). OR 8 had the least correlation with scenario planning (SP). From the results, it can be put forward that an increase in scenario planning will in this order increase (a) employees' ability to perform each other jobs; (b) the chances of that employees will regularly do a thorough analysis of situations before starting a task, and (c) employees' ability to deal with whatever comes their way if people in my team leave the organisation.

Figure 43: Confirmatory factor analysis for scenario planning



Validating research hypothesis 5

Hypothesis 5 states that employees' resistance (ER) to organisation-wide changes can be reduced with the provision of individualised/ social support (PRIS). In other words, employees' resistance (ER) to organisation-wide changes is negatively correlated with provision of individualised/ social support (PRIS). This means that the provision of both individualised support by organisations and social support from colleagues will visibly reduce the level of employees' resistance (ER) to organisation-wide changes. As shown in Figure 44, the results of the test for model fit reveal that the hypothesised relationships are of perfect fit. The obtained results of the goodness of fit were as follows: GFI = .952, AGFI = .927, CFI = .937, RMR = .066 and RMSEA = .046

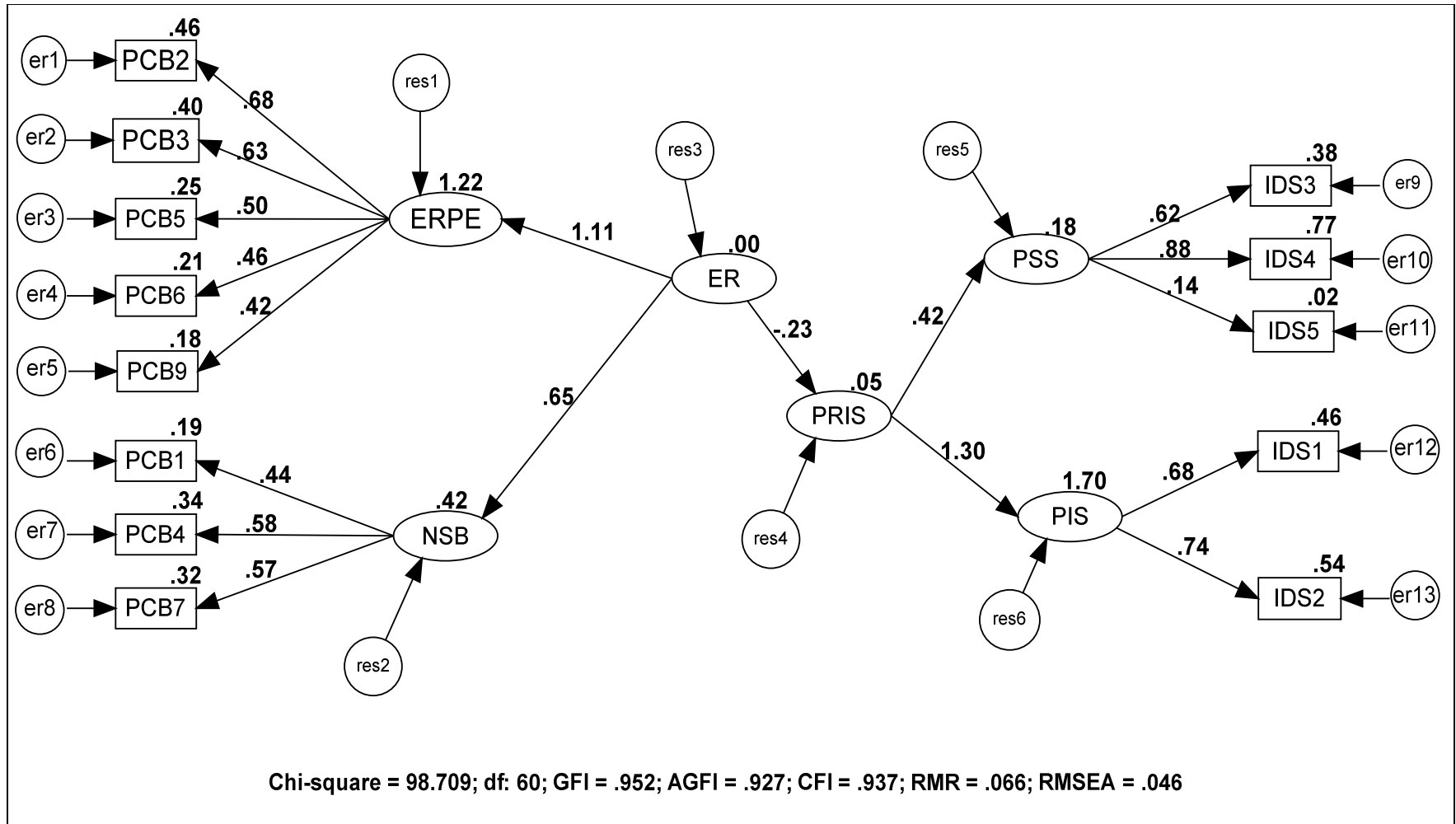
The total effect of employees' resistance (ER) to an organisation-wide change can be reduced with the provision of individualised/ social support (PRIS) on both the observed and unobserved variables are presented in Table 55. It can be seen from the table that employees' resistance (ER) to organisation-wide changes is negatively

correlated with IDS1, IDS2, IDS3, IDS4 and IDS5. In summary, employees' resistance (ER) to organisation-wide changes can be significantly reduced if employees: (a) are assisted in some ways to solve personal problems; (b) have all they need to handle unpleasant occurrences; (c) are helped to resolve issues by their team members; (d) are offered help once the need arises, and (e) know that they would probably be helped once they encountered problems. As shown in Table 55, ER has indirect effect on provision of individualised (PIS) and provision of social support (PSS). The association is negative though. Hence, this suggests that employees' resistance to organisation-wide changes (ER) can be reduced by offering employees' both individualised and social support as and when the need arises. Furthermore, IDS5 has the most effect out of the scale items used to assess OR.

Table 55: Effects of ER and PRIS on its associating research themes and scale

	Direct effect		Indirect effect	
	of ER on	of PRIS on	of ER on	of PRIS on
ERPE	1.11	.00	.00	.00
NSB	.65	.00	.00	.00
PSS	.00	.42	-.29	.00
PIS	.00	1.30	-.10	.00
IDS1	.00	.00	-.20	.89
IDS2	.00	.00	-.22	.96
IDS3	.00	.00	-.59	.26
IDS4	.00	.00	-.84	.38
IDS5	.00	.00	-.13	.06

Figure 44: Relationship between ER and PRIS



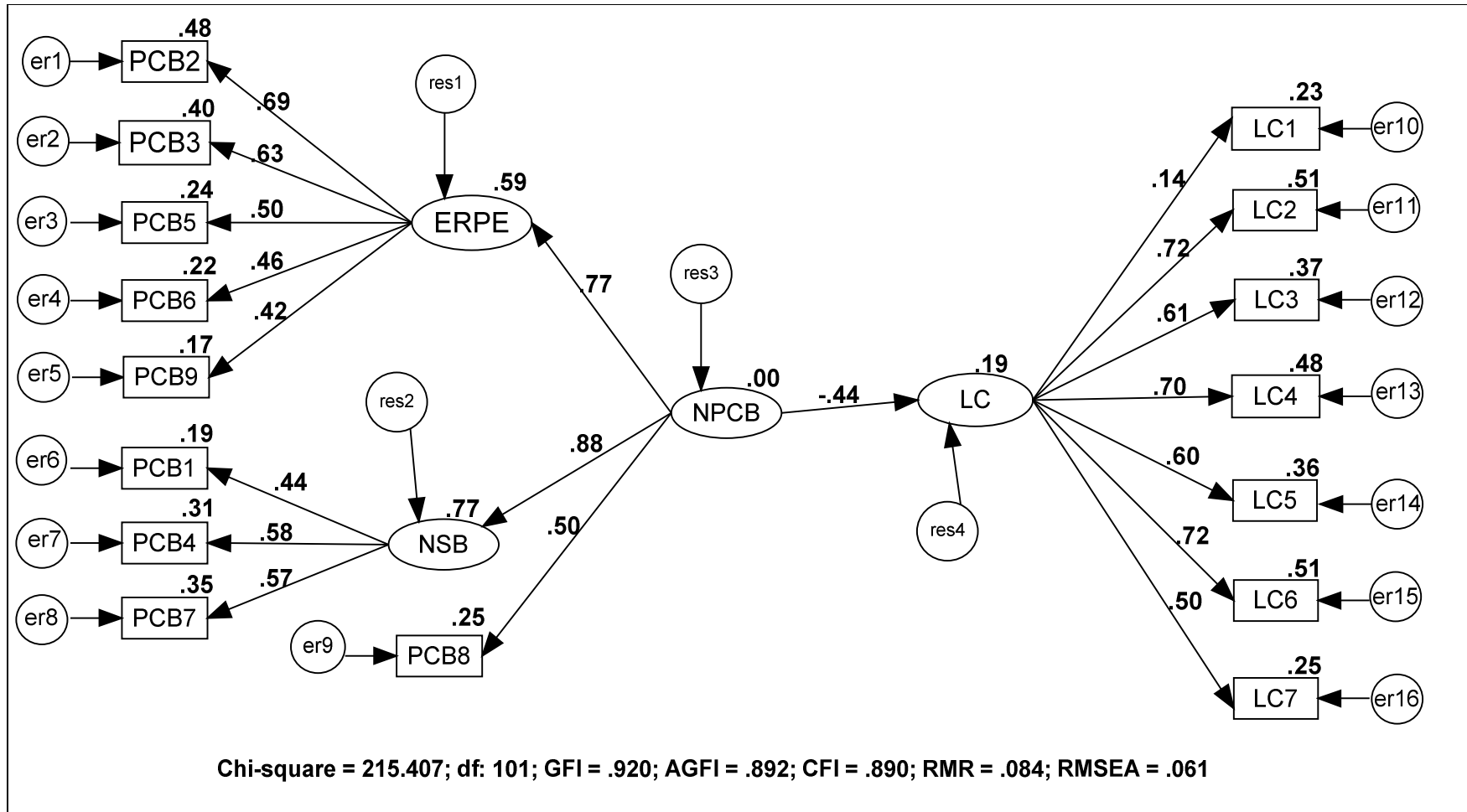
Validating research hypothesis 6 (NPCB vs. LC)

Hypothesis 6 states that employees' non-positive behaviours based on perceived change benefits (NPCB) is negatively correlated with LC. This means, the existence of a learning culture will significantly reduce: (a) employees' resentment based on past experience, (b) employees' non-supportive behaviour and employees' expressly defined non-interest. Furthermore, NPCB was found to be negatively correlated with each of the 7-item constructs used to explain the LC in organisations. As shown in Figure 45, the results of the test for model fit reveal that the hypothesised relationships are of appropriate fit. As shown in Table 56, NPCB has a negative indirect effect with all the 7 items used to assess LC. This means that each of the 7 items will reduce employees' non-positive perception of organisation-wide changes.

Table 56: Effects of NPCB and LC on its associating research themes and scales

	Direct effect		Indirect effect	
	of NPCB on	of LC on	of NPCB on	of LC on
ERPE	.77	.00	.00	.00
NSB	.88	.00	.00	.00
PCB8	.50	.00	.00	.00
LC1	.00	.48	-.21	.00
LC2	.00	.72	-.31	.00
LC3	.00	.61	-.27	.00
LC4	.00	.70	-.30	.00
LC5	.00	.60	-.26	.00
LC6	.00	.72	-.31	.00
LC7	.00	.50	-.22	.00

Figure 45: Relationship between NPCB and LC



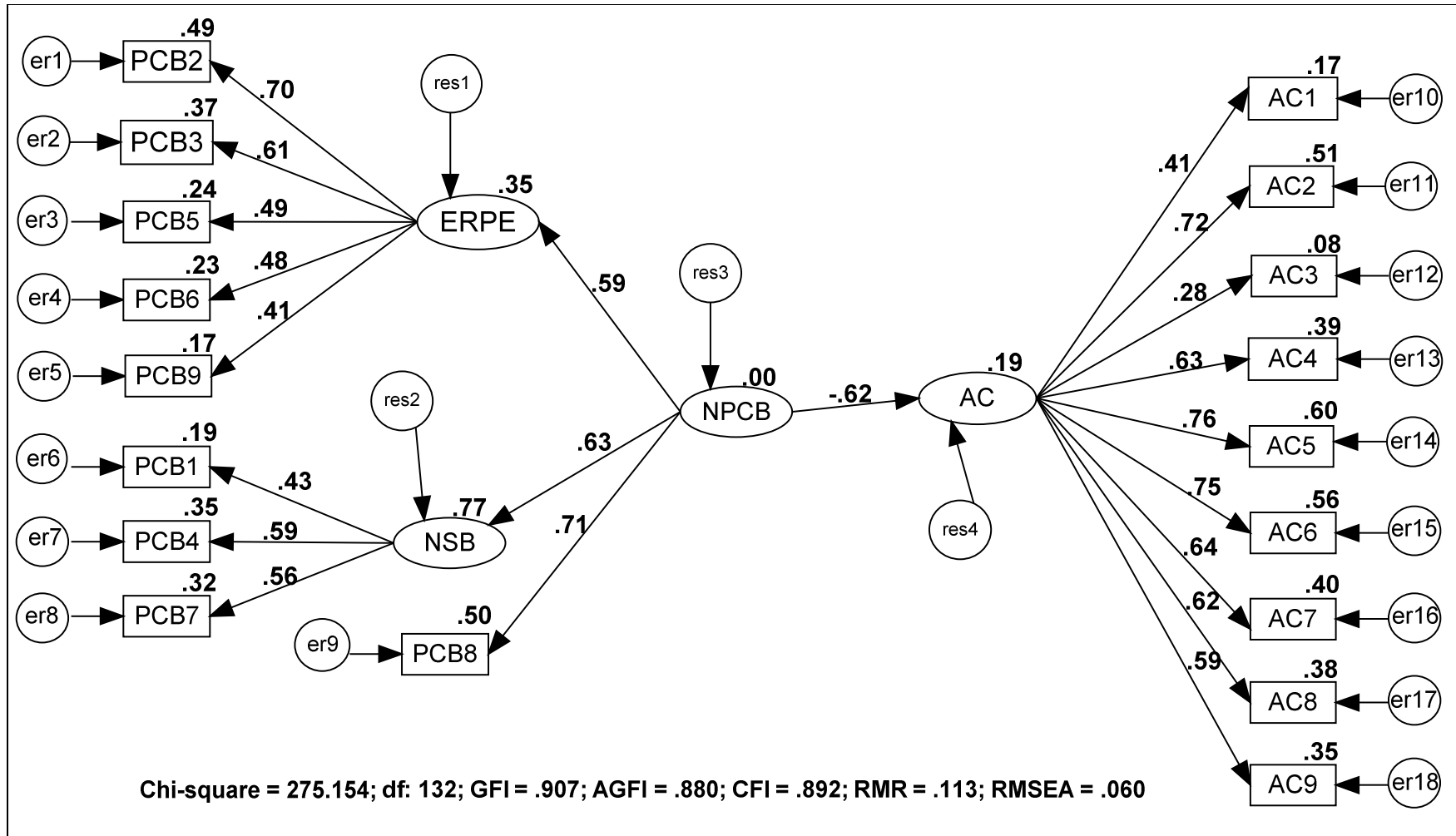
Validating research hypothesis 7 (NPCB vs. AC)

Hypothesis 7 states that NPCB is negatively correlated with AC. In other words, as employees' AC increases, NPCB decreases. Specifically, AC will comprehensively reduce: (a) employees' resentment based on past experience (ERPE), (b) employees' non-supportive behaviour (NSB) and (c) employees' expressly defined non-interests towards organisational changes (PCB8). As shown in Figure 46, the results of the test for model fit reveal that the hypothesised relationships are just of appropriate fit. The indirect and direct effect of both NPCB and AC are presented in Table 57. All the 9 items used to assess AC are negatively correlated; hence, meaning that all the 9 items can sufficiently to a varied extent reduce employees' non-positive perception of change benefits (NPCB).

Table 57: Effects of NPCB and AC on its associating research themes and scales

	Direct effect		Indirect effect	
	of NPCB on	of AC on	of NPCB on	of AC on
ERPE	.63	.00	.00	.00
NSB	.59	.00	.00	.00
PCB8	.71	.00	.00	.00
AC1	.00	.41	-.26	.00
AC2	.00	.72	-.44	.00
AC3	.00	.28	-.18	.00
AC4	.00	.63	-.39	.00
AC5	.00	.76	-.48	.00
AC6	.00	.75	-.47	.00
AC7	.00	.64	-.39	.00
AC8	.00	.62	-.38	.00
AC9	.00	.59	-.37	.00

Figure 46: Relationship between NPCB and AC



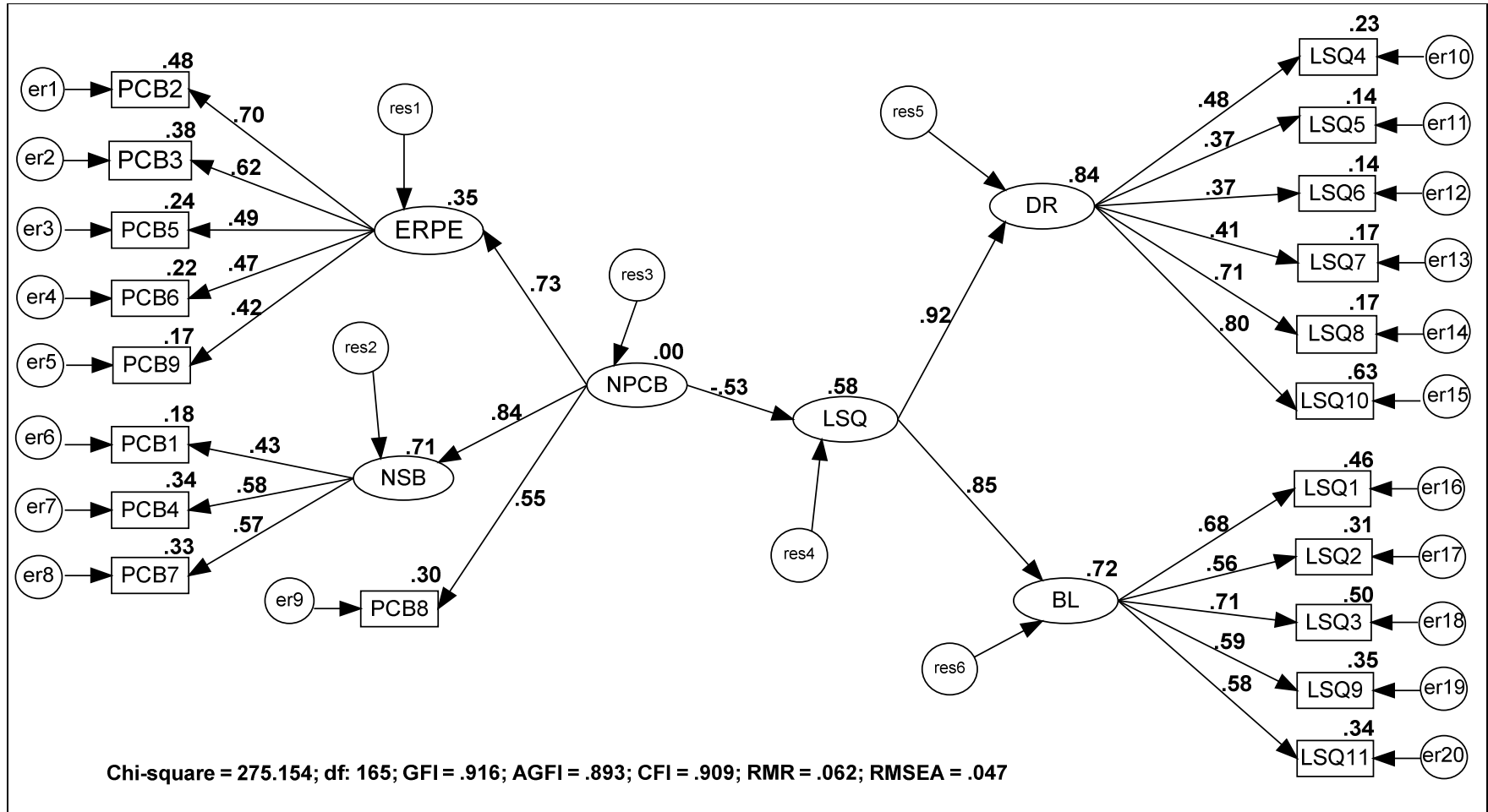
Validating research hypothesis 8 (NPCB vs. LSQ)

Hypothesis 8 states that NPCB is negatively correlated with a) clearly defined delegation of roles and responsibilities (DR), and (b) belief in leadership (BL). That is to say, when the roles and responsibilities of employees are clearly outlined as well as when employees' belief in their organisations' leadership increases, employees' NPCB would reduce. As shown in Figure 47, the results of the test for model fit reveal that the hypothesised relationships are of appropriate fit. As shown in Table 58, NPCB has a negative indirect effect with all the 7 items used to assess LSQ. LSQ1 has the least correlation with NPCB.

Table 58: Effects of NPCB and LSQ on research themes and scales

	Direct effect		Indirect effect	
	of NPCB on	of LSQ on	of NPCB on	of LSQ on
ERPE	.73	.00	.00	.00
NSB	.84	.00	.00	.00
PCB8	.55	.00	.00	.00
DR	.00	.92	-.49	.00
BL	.00	.85	-.45	.00
LSQ1	.00	.00	-.31	.58.
LSQ2	.00	.00	-.25	.47
LSQ3	.00	.00	-.32	.60
LSQ4	.00	.00	-.23	.44
LSQ5	.00	.00	-.18	.34
LSQ6	.00	.00	-.18	.34
LSQ7	.00	.00	-.20	.37
LSQ8	.00	.00	-.34	.65
LSQ9	.00	.00	-.26	.50
LSQ10	.00	.00	-.39	.73
LSQ11	.00	.00	-.26	.50

Figure 47: Relationship between NPCB and LSQ



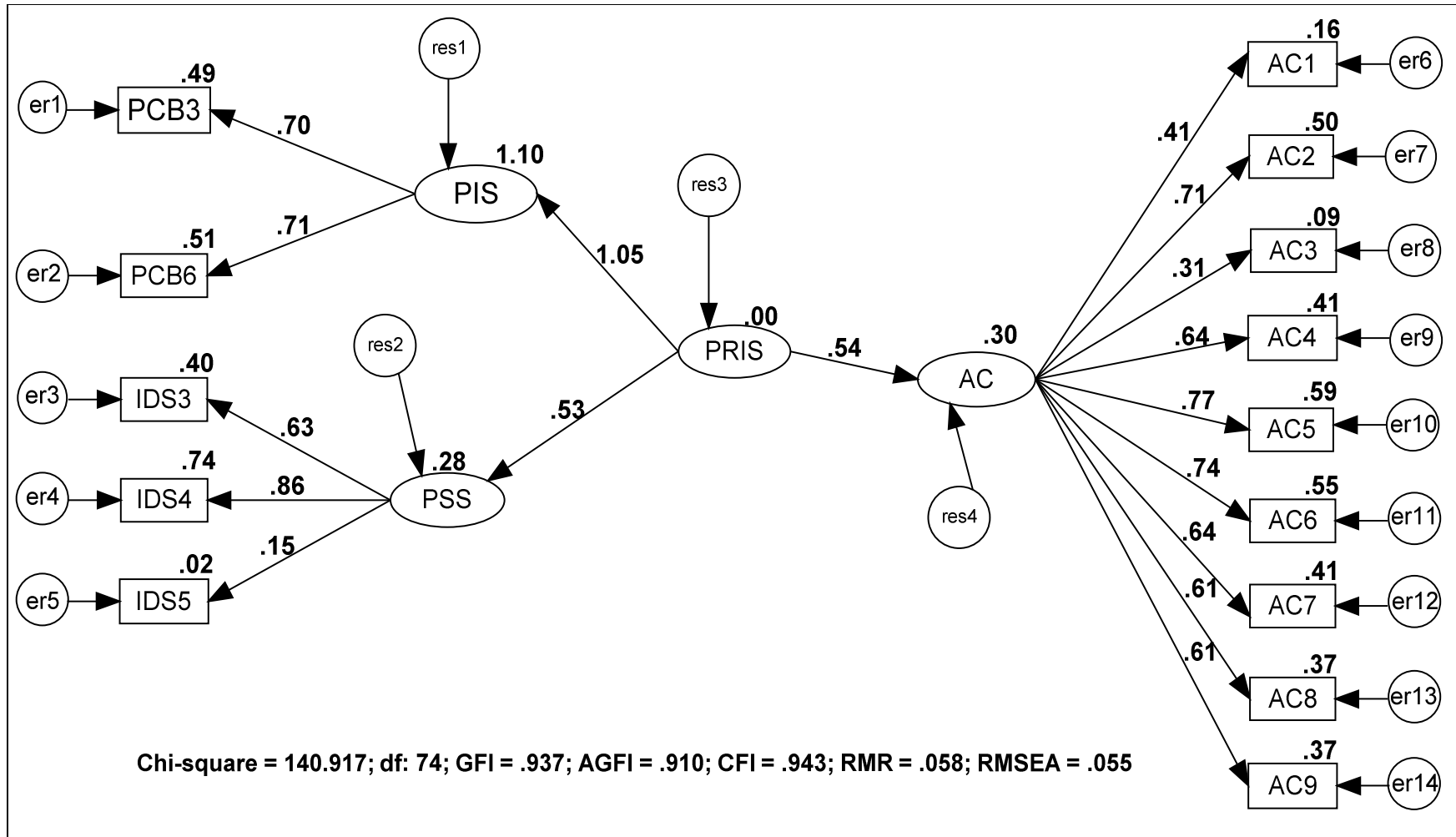
Validating research hypothesis 9 (PRIS vs. AC)

Hypothesis 9 states that provision of individualised/ social support (PRIS) will increase employees' affective commitment towards their organisations (AC). In other words, there exists a significant positive association between PRIS and AC. In addition, both PIS and PSS are positively correlated with all the 7-item constructs used to explain AC. As shown in Figure 48, the results of the test for model fit reveal that the hypothesised relationships are of appropriate fit. As shown in Table 59, PRIS has positive indirect effect on all the 7 items used to assess AC. In other words, PRIS will increase employees' AC.

Table 59: Effects of PRIS and AC on its associating research themes and scales

	Direct effect		Indirect effect	
	of PRIS on	of AC on	of PRIS on	of AC on
PIS	1.05	.00	.00	.00
PSS	.53	.00	.00	.00
AC1	.00	.41	.22	.00
AC2	.00	.71	.39	.00
AC3	.00	.31	.17	.00
AC4	.00	.64	.35	.00
AC5	.00	.77	.42	.00
AC6	.00	.74	.41	.00
AC7	.00	.64	.35	.00
AC8	.00	.61	.33	.00
AC9	.00	.61	.33	.00

Figure 48: Relationship between PRIS and AC



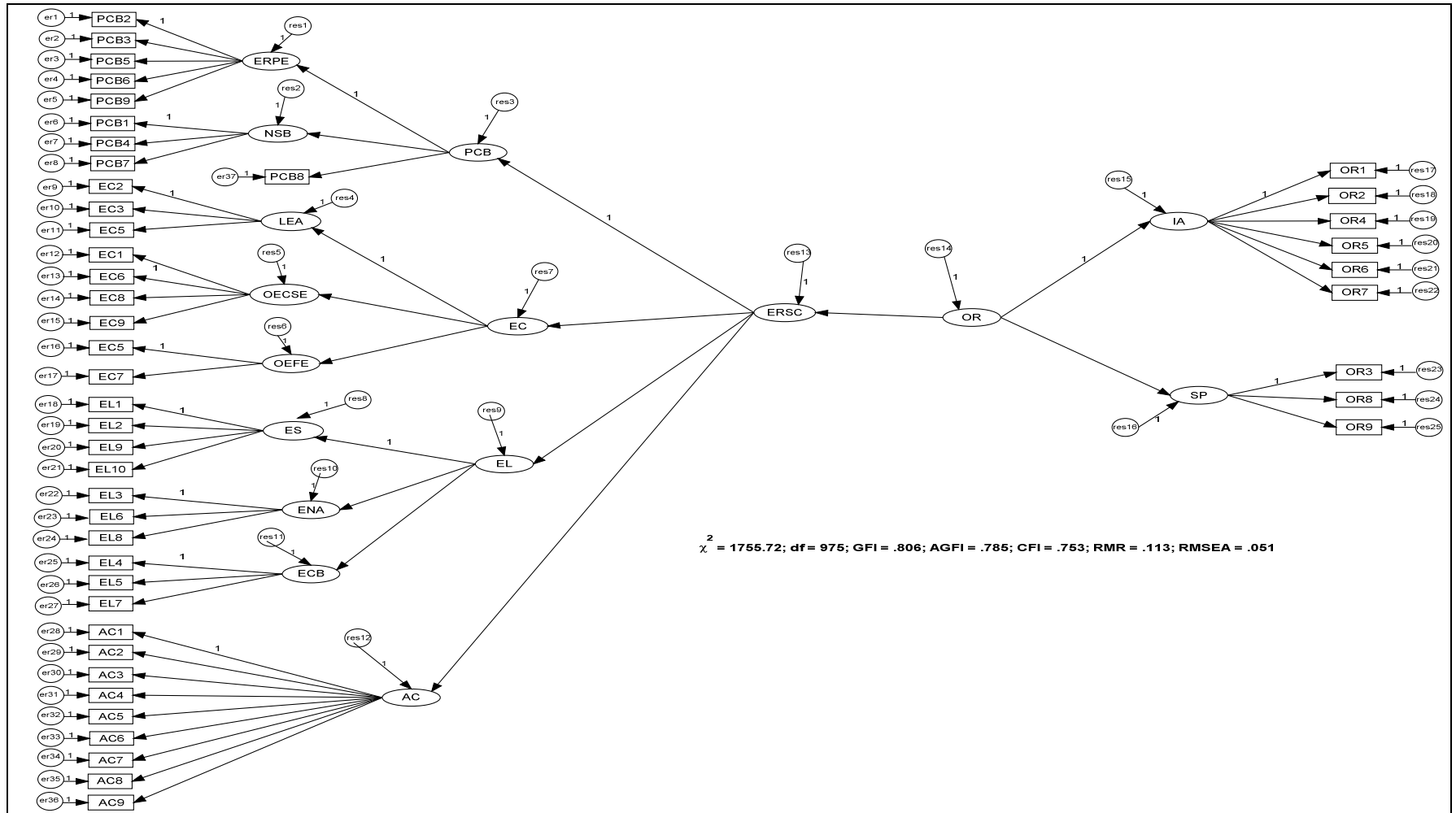
Validating research hypothesis 10 (ERSC vs. OR)

Hypothesis 9 states that employees' readiness to support organisation-wide changes will increase organisations chances of recovering should the organisation-wide change fails. As shown in Figure 49, the association was found to be positive. In addition, the results of the test for model fit reveal that the hypothesised relationships are of appropriate fit. Both the indirect and direct effects of both ERSC and OR on all the scale and scale items are presented in Table 60. From the table, it can be seen that as employees' readiness to support organisation-wide changes increase, the following will be reduced: (a) ERPE; (b) NSB and (c) PCB8.

Table 60: Effects of ERSC and OR on its associating research themes and scales

	Direct effect		Indirect effect	
	of ERSC on	of OR on	of ERSC on	of OR on
PCB	.83	.00	.00	.53
EC	.81	.00	.00	.52
EL	.88	.00	.00	.56
AC	.80	.00	.00	.51
ERPE	.00	.00	-.51	-.33
NSB	.00	.00	-.52	-.34
PCB8	.00	.00	-.58	-.37
LEA	.00	.00	.69	.44
OECSE	.00	.00	.69	.44
OEFE	.00	.00	.65	.41
ES	.00	.00	.78	.50
ENA	.00	.00	.19	.12
ECB	.00	.00	.24	.15
IA	.00	.95	.00	.00
SP	.00	.64	.00	.00

Figure 49: Relationship between ERSC and OR



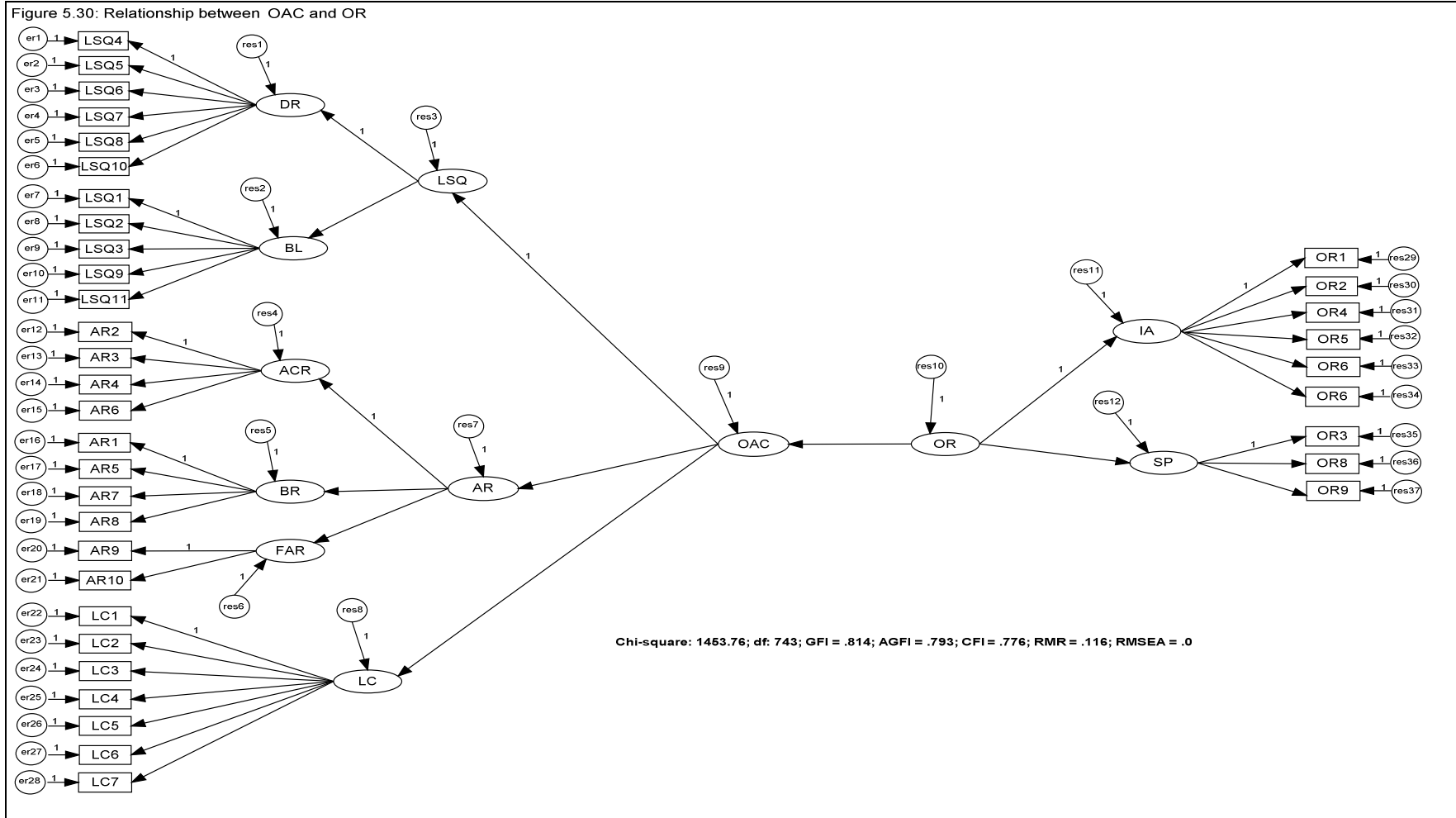
Validating research hypothesis 11 (OAC vs. OR)

Hypothesis 9 states that organisation adaptive capacity (OAC) will increase organisations chances of successfully recovering should the organisation-wide change fails. As shown in Figure 50, the association was found to be positive. In addition, the results of the test for model fit reveal that the hypothesised relationships are of appropriate fit. Both the indirect and direct effects of both ERSC and OR on all the scale and scale items are presented in Table 61. From the table, it can be seen that as OAC increases, OR will also increase. Furthermore, the direct effect of OR the two scales used to assess OAC was found to be positive. . Thus, an increase will OR can be achieved by increasing: (a) LC; (b) LSQ; and (c) AR.

Table 61: Effects of OAC and OR on its associating research themes and scales

	Direct effect		Indirect effect	
	of OAC on	of OR on	of OAC on	of OR on
LC	.56	.00	.00	.58
LSQ	.59	.00	.00	.42
AR	.51	.00	.00	.38
DR	.00	.00	.41	.46
BL	.00	.00	.31	.33
ACR	.00	.00	.44	.54
BR	.00	.00	.47	.57
FAR	.00	.00	.56	.37
IA	.00	.61	.00	.00
SP	.00	.48	.00	.00

Figure 50: Relationship between OAC and OR



Validating research hypothesis 12 (ERSC vs. PRIS)

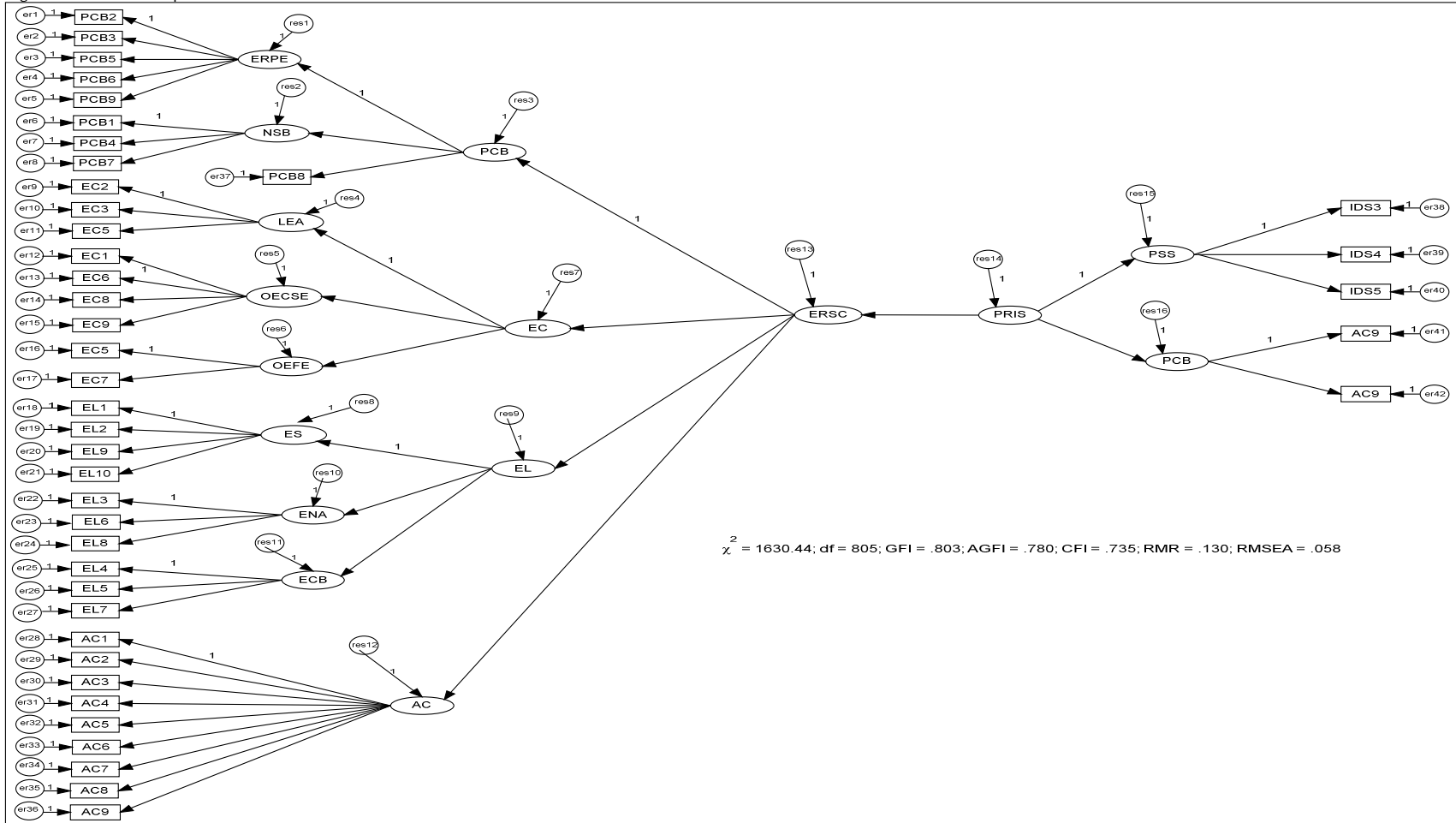
Hypothesis 9 states that employees' readiness to support organisation-wide changes can be increased through the provision and use of individualise and social support. The relationship was found to be positive. The model is shown in Figure 51. In addition, the results of the test for model fit reveal that the hypothesised relationships are of appropriate fit. The results of the indirect and direct effects of both ERSC and PRIS on all the scale and scale items are presented in Table 62. From the table, it can be seen that as employees' readiness to support organisation-wide changes increase, the following will be reduced: (a) ERPE; (b) NSB and (c) PCB8.

Table 62: Effects of ERSC and PRIS on its associating research theme and scales

	Direct effect		Indirect effect	
	of ERSC on	of PRIS on	of ERSC on	of PRIS on
PCB	.69	.00	.00	.59
EC	.95	.00	.00	.82
EL	.79	.00	.00	.68
AC	.75	.00	.00	.64
ERPE	.00	.00	-.51	.41
NSB	.00	.00	-.52	.40
PCB8	.00	.00	-.58	.38
LEA	.00	.00	.69	.69
OECSE	.00	.00	.69	.67
OEFE	.00	.00	.65	.68
ES	.00	.00	.78	.62
ENA	.00	.00	.19	.13
ECB	.00	.00	.24	.18
PSS	.00	.60	.00	.00
PIS	.00	.94	.00	.00

Figure 51: Relationship between ERSC and PRIS

Figure 5.31: Relationship between ERSC and PRIS



5.3 The Mann-Whitney U-tests results

The case organisations were put into categories based on their similarities and differences. The results of the Mann-Whitney U-tests performed for the categories are presented thus:

- First category: Technologically-driven and service-oriented organisations

Case organisations were grouped into technologically-driven and service-oriented organisations based on their core functionalities as shown in Table 63. Three of the case organisations were grouped under technologically-driven organisations while the remaining case organisations were put under service-oriented organisations.

Table 63: Technologically-driven and service-oriented organisations

Technologically-driven organisations	Service-oriented organisation
Company A	Company C
Company B	Company E
Company D	Company F
	Company G
	Company H
	Company I

The results of the Mann-Whitney U-test (see Table 64) showed that employees' perception of change benefits (PCB), organisations' effort towards making communication effective (OECSE), employees' level of awareness (LEA), provision of opportunities for employees to freely express themselves (OEFE) and employees' sincerity (ES) are in no way different between technologically-driven and service organisations. That is to say, the Z value is not significant since $p > 0.05$ (for a 2-tailed test). Therefore there is no need to check the effect size of the relationship (Pallant 2007). However, there is not enough evidence to state that the tests results identified significant difference of employees' non-allegiance to organisations (ENA), employees' continued belief in organisations (ECB) and affective commitment of employees towards their organisations (AC) between technologically-driven and

service-oriented organisations. ENA has a large effect size while the remaining two (ECB and AC) showed small effect.

Table 64: Mann-Whitney U-Test Statistics^a for ERSC

	PCB	OECSE	LEA	OEFE	ENA	ES	ECB	AC
Z	-1.384	-1.274	-.377	-.651	-8.596	-.368	-2.133	-2.516
Asymp. Sig.	.166	.203	.706	.515	.000*	.713	.033*	.012*
Effect size, r	-	-	-	-	.49	-	.12	.14

a. Grouping variable: Types of organisations (in this case, technological-driven or service-oriented companies)

* The result show a significant difference at $p < 0.5$ (for a 2-tailed test)

In Table 65, in relation to targeted human development organisational adaptive capacity (OAC), the Mann-Whitney U-test showed that neither learning culture (LC), belief in leadership (BL) nor access to resources (ACR) in technologically-driven organisations and service-oriented organisations are different. On the other hand, the manner in which responsibilities are delegated (DR), benefits of resources are perceived and accessed (BR) and fair allocation of resources (FAR) were found to different when compared technologically-driven organisations to service-oriented organisations. Two of the measures, DR and FAR, showed small effects and BR showed medium effect. The final Mann-Whitney U-tests for PRIS, CS and OR showed that showed no significant difference as all the Asymp. Sig were greater that $p > 0.05$ (for 2-tailed tests).

Table 65: Mann-Whitney U-Test Statistics^a for OAC

	LC	BL	DR	ACR	BR	FAR
Z	-.915	-1.178	-2.993	-1.674	-5.536	-3.512
Asymp. Sig.	.360	.239	.003*	.094	.000*	.000
Effect size, r	-	-	.17	-	.32	.20

a. Grouping variable: Types of organisations (in this case, technological-driven or service-oriented companies)

* The result shows a significant difference at $p < 0.05$ (for a 2-tailed test)

- Second category: Industry type

In this second category, case organisations were grouped based on the type of industry in which they operate. As shown in Table 66, two of the cases organisations were classified as Gas and Gas organisations while the remaining seven were put in non-Oil and Gas organisations.

Table 66: Oil and Non-Oil Organisations

Oil and Gas organisations	Non Oil and Gas organisations
Company A	Company C
Company B	Company D
	Company E
	Company F
	Company G
	Company H
	Company I

From the results of the Mann-Whitney U-tests for the operational measures used to assess ERSC (i.e. PCB, OECSE, LEA, OEFE, ENA, ES, ECB and AC) presented in Table 67, there is likely to be differences in ENA, ECB and AC in Oil and Non-oil organisations. The difference is of large effect as regards ENA while it is of small effect in relation to both ECB and AC. In the same manner, the results pointed out that there is no sufficient evidence to establish that there is no significant difference in PCB, OECSE, LEA, OEFE and ES in Oil and Non-oil organisations, since all the p values are greater than 0.05 (for 2-tailed test).

Table 67: Mann-Whitney U-Test Statistics^a for ERSC

	PCB	OECS	LEA	OEFE	ENA	ES	ECB	AC
Z	-1.850	-.283	-1.090	-1.401	-9.703	-1.286	-2.288	-3.764
Asymp. Sig.	.064	.777	.276	.161	.000*	.198	.022*	.000*
Effect size, r	-	-	-	-	.57	-	.13	.22

a. Grouping variable: Industry type (i.e., Oil and Gas and Non Oil and Gas sectors)

* The result show a significant difference at $p < 0.05$ (for a 2-tailed test)

As regards OAC, the Mann-Whitney U-tests results reveal that BR and FAR is significantly different in oil organisations and non-oil organisations, although both showed that the effect size is small. The comparisons of the other operational measures (which are LC, BL, DR and ACR) came back insignificant as $p > 0.05$ (for 2-tailed tests). These results are presented in Table 68.

Table 68: Mann-Whitney U-Test Statistics^a for OAC

	LC	BL	DR	ACR	BR	FAR
Z	-.046	-.547	-1.759	-1.152	-5.008	-3.992
Asymp. Sig.	.963	.585	.079	.249	.000*	.000*
Effect size, r	-	-	-	-	.29	.23

a. Grouping variable: Industry type (i.e., Oil and Gas and Non Oil and Gas sectors)

* The result show a significant difference at $p < 0.05$ (for a 2-tailed test)

The final set of Mann-Whitney U-tests was performed for PRIS, CS and SP. Unlike the previous Mann-Whitney U-test performed, as shown in Table 69, the results did show that the manner and way in which oil and gas organisations provide individualised support to their employees is different from how it is carried out in non-oil and gas organisations, even though the significance was small effect. There was

no sufficient proof to convincingly state that PSS, CS, IA and SP is different in oil and gas organisations and non-oil and gas organisations.

Table 69: Mann-Whitney U-Test Statistics^a for PRIS, CS and SP

	PSS	PIS	CS	IA	SP
Z	-1.337	-2.346	-.348	-.907	-.178
Asymp. Sig.	.181	.019*	.728	.365	.858
Effect size, r	-	.13	-	-	-

a. Grouping variable: Industry type (i.e., Oil and Gas and Non Oil and Gas sectors)

* The result show a significant difference at $p < 0.05$ (for a 2-tailed test)

- Size of organisation

The researcher considered size of organisation based on the fact each enterprise is never the same even if they make similar interpretations of their environments, and initiate strategic changes that seem similar in content, differences remain in terms of what they are actually able to do and the results they attain (as inferred in both Amis et al. 2004; Meyer and Stensaker 2006). Although one may still think that smaller organisations maybe at a disadvantage because of their size (Buonanno et al. 2005), there are however few accounts that identify that larger organisations are as vulnerable as smaller organisations (Sheffi 2005b; Sull 1999). Generally, the number of employees in organisations is often used to determine the size of organisations than organisations' total income (Dholakia and Kshetri 2004; Freeman and Doyle 2010; Hadjimanolis 1999). In view of this, organisations with a staff strength less than 250 are usually grouped as Small and Medium-sized Enterprises (SMEs) while organisations with more than 250 staffs are Large Enterprises (Daniel et al. 2002; Hadjimanolis 1999). Based on this information, as shown in Table 70 the case study organisations were classified into SMEs and Large Enterprises.

Table 70: SMEs and Large Enterprise.

Large Enterprise	SMEs
Company A	Company B Company C Company D Company E Company F Company G Company H Company I

Similarly, as it was carried out for the last two grouping variables, Mann-Whitney U-tests was also performed for all the operational variables used to assess ERSC, OAC, PRIS, CS and OR. Out of all the 19 operational measures, only with six were significance difference observed between SMEs and Large Enterprises. As shown in Table 71, ENA, ECB, ACR, BR, and SP showed small effect while ENA showed a very a large effect.

Table 71: Mann-Whitney U-Test Statistics^a for ERSC

	ENA	ECB	ACR	BR	SP
Z	-12.314	-3.404	-3.237	3.926	-2.197
Asymp. Sig.	.000*	.001*	.000*	.001*	.028*
Effect size, r	.71	.20	.19	.23	.13

a. Grouping variable: Size of organisation (i.e., Small and Medium-sized and Large enterprises

* The result show a significant difference at $p < 0.05$ (for a 2-tailed test)

5.4 Chapter summary

The results of the survey have been presented in this chapter. Descriptive analyses of each of the scales in the questionnaire were provided. This was used as an introductory approach before the factor analysis results were provided. In addition, confirmatory factor analyses were performed so as to establish the relational influence of each of the scale items on the corresponding scales. Based on these analyses, the research hypotheses were validated. Below is an overview of the results of the hypotheses validations:

- i. Results presented in the earlier part of this chapter show that there exists a positive relationship between employees' non-interest in their organisations' ability to successfully implement organisation-wide changes: and: (a) employees' resentment based on past experience; (b) employees' non-supportive behaviour. As seen in the results of the hierarchical regression in Table 34, employees' non-interest in organisations' ability to successfully implement organisation-wide changes is increased when their past experience of similar changes was unpleasant. Employees' non-interest in organisations' ability to successfully implement organisation-wide changes is further increased with employees' non supportive behaviours.
- ii. Employees that had significant knowledge of their organisations' ongoing organisation-wide changes and deep understanding of what the change was targeted at were found to believe that they will benefit from such changes. Hence, organisations can get their employees' not to resist their planned organisation-wide changes by increasing their employees' level of awareness and knowledge of the change information.
- iii. This is similar to the second hypothesis above. The only difference is that effective communication is used as a mediating factor between among employees' attitude based on perceived change benefits and employees' loyalty. The positive correlation between employees convinced perception that their will benefits from implemented organisation-wide changes and

employees' loyalty was found to increase more when effective communication was added as an independent variable.

- iv. The results of the direct and indirect effect of employee' attitude based on perceived change benefits, effective communication, employees' loyalty and employees' affective communication of employees towards their organisation on employees' readiness to support organisation-wide changes reveal that employees' affective communication of employees has the highest different effect; effective communication had the next highest direct effect followed by employees' attitude based on perceived change benefits. Employees' loyalty had the least direct effect on employees' readiness to support organisation-wide changes.
- v. Provision of individualised and social support helps employees ease through organisation-wide changes. Thus, employees are less resistance than when the provision is not available to employees.
- vi. The existence of a learning culture in organisations helps minimise employees' non-positive behaviours based on perceived change benefits. as shown in Table 58, the existence of learning culture had the most direct effect on employees' non-supportive behaviours while employees' non-interest though also positively influenced by the existence of a learning culture would be the least impacted out of employees' resentment on past experience, and employees' non-interest.
- vii. Employees' non-positive behaviours based on perceived change benefits and employees' affective commitment to their organisations correlated negatively. Employees' non-positive behaviours based on perceived change benefits had the most indirect effect on employees' desire to accept almost any type of job assignment in order to keep working for their organisations.
- viii. Employees' readiness to support organisation-wide changes increased when the organisations develop and makes available targeted human development organisational adaptive capacity. The use of provision of individualised/ social

support (PRIS) and employees' affective commitment towards their organisations further increases the extent in which employees' readiness to support organisation-wide changes correlated with targeted human development organisational adaptive capacity.

- ix. Lastly, the existence of systems' recovery strategies correlated slightly more with targeted human development organisational adaptive capacity than employees' readiness to support organisation-wide.

Each of the hypothesised cases presented in Chapter 2 were confirmed as shown in Table 72. In Chapter 6, the research themes are explained in depth in relation to existing theory and practice. In the next chapter, both the pilot and survey results are discussed.

Table 72: Summary of the results of research hypotheses testing

Research hypotheses	Status
A positive correlation exists between employees' non-interest in their organisations' ability to successfully implement organisation-wide changes: and: (a) employees' resentment based on past experience; and (b) employees' non-supportive behaviour.	Confirmed
A positive correlation exists between employees' attitude based on perceived change benefits and effective communication.	Confirmed
A positive correlation exists among employees' attitude based on perceived change benefits, effective communication and employees' loyalty.	Confirmed
Employee' attitude based on perceived change benefits, effective communication, employees' loyalty and employees' affective communication of employees towards their organisation have a positive relationship with employees' readiness to support organisation-wide changes.	Confirmed

Research hypotheses	Status
A negative correlation exists between employees' resistance to organisation-wide changes and the provision of individualised/ social support.	Confirmed
A negative correlation exists between employees' non-positive behaviours based on perceived change benefits and the existence of a learning culture in organisations.	Confirmed
A negative correlation exists between employees' non-positive behaviours based on perceived change benefits and employees' affective communication of employees towards their organisation.	Confirmed
A negative correlation exists between employees' non-positive behaviours based on perceived change benefits: (a) clearly defined delegation of roles and responsibilities, and (b) belief in leadership.	Confirmed
A positive correlation exists between provision of individualised/ social support (PRIS) and employees' affective commitment towards their organisations.	
A positive correlation exists between employees' readiness to support organisation-wide changes and organisational resilience.	Confirmed
A positive correlation exists between organisation adaptive capacity and organisational resilience.	Confirmed
A positive correlation exists between employees' readiness to support organisation-wide changes and provision and use of individualise and social support	Confirmed

6.1 Introduction

In the previous two chapters, the pilot study and the survey results were presented. In this chapter, a discussion of the research findings is presented. Information from thirty five senior management staff from the nine case organisations was taken into consideration. Peculiar examples unique to each of the nine organisations' adopted are used to highlight the observed hindrances and enablers to organisations becoming both resilient during or after organisation-wide changes. A general analysis of each of these peculiar examples is presented in order to highlight key resilience issues uncovered in the course of this research study. Likewise, all other relevant issues not pertaining to these organisations' effort at becoming resilient as at the time the study was conducted have been surmised are presented. This is done so as to emphasise the need not to treat the process of building-in resilience into organisational systems as an isolated process but rather as a complex, inter-related and dynamic process. In summary, the overriding aim of this chapter is to illustrate how the research objectives have been met while also answering the research questions introduced in the first chapter.

6.2 The need to build in resilience into systems

In this study, it was found that all the nine organisations investigated had in-existence either formal or informal procedures through which they plan ahead and hope will be sufficient to help them recover from disruptive events although what is regarded as disruptive events differ across the organisations. In Case A, disruptive events are *"anything that can cause us to shutdown our gas feeds"* (Manager, JVO); in Case B, *"a damage to one of the WST-3 used during ocean drilling"* (Manager, Seismic Services) will be disastrous. (WST-3 is one of the expensive delicate tools used for seismic). In Case C, an example of the clinic's disruptive events is *"power cut during surgery"* (Managing Partner II); in Case D, fire outbreak (Sales Manager) or burglary (Workshop Manager) are classified as disruptive events. In Case E, the

loss of any of their first tier clients is their greatest fear (Managing Director, Case E). In the last three Cases, shortage of funds was recognised as something that will adversely impact on their organisations. Hence, since case organisations have been found to devise ways through they avoid these respective events; one can assume that organisations very much understand events that can cause significant disruptions to their systems.

As such, the process of building-in resilience into systems is unique and specific to individual organisations and more often than not developed in-house in organisations whose leaderships have had similar roles and many years of experiences working in highly successful organisations or with multinational organisations (for example, as observed in case organisations E and F). Usually, Good Management and Industry Best Practices, e.g. ISO standards, are used as benchmarks and more likely than not consultants are engaged at the developmental stages of the processes. Evidence from this research further indicates that such factors as financial capability of organisations, level of experience and exposure of top management, the setting up of a dedicated team, direct involvement of top managements and the formalising of resilience-building concepts and ideologies as one of organisations' main objectives will vastly influence organisations' capability to build-in resilience into their systems. In the next subsections, the process of building in resilience into changing and changed systems is described as observed across case organisations

6.2.1 The process of building in resilience into changing systems

None of the organisations really had a distinct process through which they can build-in resilience into their changing systems. However, in larger SMEs considered, they have a more formalised approach through which ongoing changes can be assessed to determine whether it is going on as expected or not. For example, in Case B, the organisation had over time developed a collaborative approach on how to remain effective and operational in normal and amidst disruptive occurrences. In the organisation (i.e. Case B), the organisation has a group called the Projects and Operations' Integrity (POI) team whose main objectives of the POI team are to: (a) identify and determine the criticality of the core functions of the organisation; (b)

draw a profile of each core function identified, which includes both success and failure conditions; (c) establish actions that will help sustain success conditions while also designing counter measures as per the failure conditions; and (d) ensure that risk of catastrophic failure in major areas of the organisations is at the barest minimum. The team's sub-actions include:

i. Conducting regular review meetings with stakeholders:

The POI team develops a list of all ongoing projects in the organisation, after which criticality of the projects are established. Criticality of projects, in Case organisation B, is basically described in terms of projects that require immediate remedial actions or urgent attention. As such, projects are considered critical when early reviews of the project status indicate that allocated resources (i.e. time, human resources and so on) have exceeded initial forecasts. Four main criteria used to establish criticality of ongoing projects are (a) cost of the project, (b) the time scale of the projects, (c) the urgency for the need of the project, and (d) the visibility of the project, which explains the importance of the project and extent to which top management is involved. One thing the POI team looks out for as regards cost of project and time scale is whether the project has overrun its budgeted cost and stipulated project time respectively. In relation to cost of project, a cost allowance is set depending on several undisclosed factors. Urgency of projects is determined on the basis of what the project intends to achieve.

ii. Establishing reasons for deviations:

Deviations to original plans and timescales are assessed. This outlines the typical cause-and-effect analysis, but in a more engaging and involving manner. Usually, teams responsible for projects requiring immediate remedial actions are invited to a meeting by the POI team. One-by-one, team members were first asked to state why they probably think the project is overrunning its intended expectations. Together with the team, the moderator narrows down the observed reasons. Thereafter, team members were given the chance to proffer solutions to their stated reasons for why the project is not going as well as desired. By the end of the meeting, the problems and offered solutions are written out on a big white board. The POI team then goes

away to develop an all-inclusive comprehensive, remedial implementation plan. Before the remedial plan is implemented, two endorsements are obtained. The first is the stakeholders' endorsement and the second is the technical endorsement. The stakeholders' endorsement is usually obtained from key project team members and related functions of the projects under review, while technical endorsements are from subject experts who are normally very senior staff and rarely consultants. Issues outside the scope of the POI team are escalated.

iii. Creating ownership of projects and associated core functions:

Once the criticality of projects that seem to be overrunning their timescales are performed, ownerships of such projects are created as the all-inclusive comprehensive remedial plan developed is implemented. This means that a senior staff or a division in the organisation is appointed to oversee that these projects are reviewed and remedied. The primary task of the senior staff is make employees, directly involved with the transformation project, fully understand their responsibilities. Also, in most instances, senior functional management staff is preferred as this indicates that top management are directly involved and interested in the transformational projects. In addition to creating ownerships for projects, ownerships are also created for the organisations' core functions. Typical responsibilities of project or core business owners include: strategic oversights, day-to-day supervising and periodic evaluation of the projects, resolving of escalated issues, project or business reviews and status updating.

iv. Trend analysis of projects rectified:

At the completion of rectified changing systems, the associated activities of the project are summarised. The purpose for trend analyses of rectified projects or otherwise is to document shared experiences and workflows in dedicated databases. At the end of each trend analysis of rectified projects, three questions would assumedly have been answered. These are (a) How has the project affected the organisation's working capability? This entails answering whether the project has been worthwhile since its implementation? If it has not, what was faulty in the needs' assessment procedure adopted? (b) in retrospect, what lessons have been learnt

and what could the organisation have done differently? and (c) how would the organisation go about implementing similar future projects rightly and successfully? Results or answers to these questions are captured and used to develop a comprehensive history or catalogue of projects. In addition, these serve as future knowledge impacting tips.

v. Cross training of staff:

One last sub function of the POI team is to cross train staff. With the help of consultants, employees' required skill level for roles and responsibilities are determined. A training programme is then developed specifically for each job function. Based on managers' request also, dedicated training programmes are developed. In the long run, cross training of staff enables employees to perform similar lateral jobs and even carry out functional jobs better. Lateral jobs are different roles and responsibilities of individuals or colleagues e.g. a production engineer is trained on some basic roles and responsibilities of a completion engineer. On the other hand, functional jobs are jobs within the same specifications or responsibilities. For example, production associates becoming more acquainted with roles and responsibilities of senior production associates. The major benefit of cross training is that it allows an organisation to carry on, with little or no disruptions, if an employee is unavailable for any reason.

How a similar large organisation attempted to build-in resilience into their changing systems

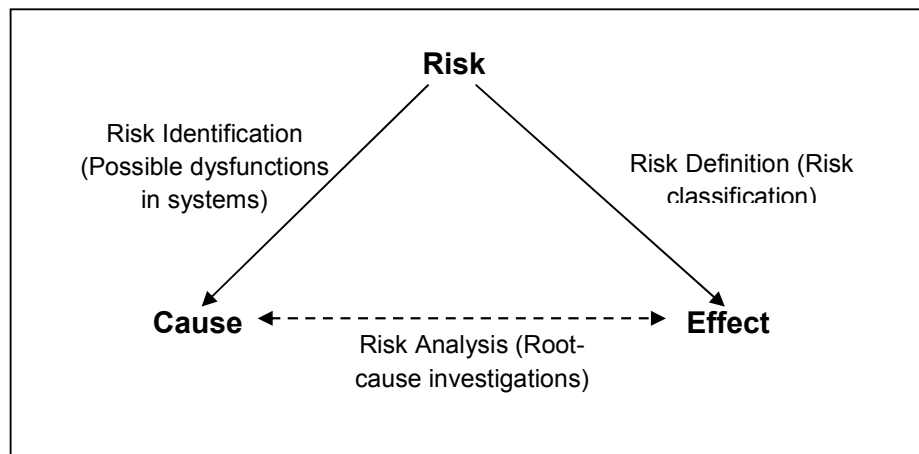
These above-listed five sub functions of the POI team in Case B are similar to how Case A assesses and resolves emergent issues during their transformation effort. In Case A, there is an embedded framework that is although exclusively designed for identifying and managing inherent risks in organisational systems and evaluating systems and individuals' competency levels pre-implementation. This framework, according to the Executive Director of the organisations' Joint Venture Operations (JVO), is likewise applicable and capable of identifying integral risks in ongoing organisation-wide changes. The capability of the described framework to identify

inherent risks of failure in on-going organisation-wide changes could, however, not be confirmed in this research. The framework involves three steps, namely:

i. Risk definition, identification and assessment

The main function of risk identification and assessment exercises are primarily towards creating appropriate measure through which risks can be properly scoped and managed. The process of defining or identifying risk provides concise explanations of: (a) what is meant by risk, (b) why it is called or should be called a risk, and (c) establishing how the risk will be identified. Hence, the first process in defining and identification of risk in Case A, is to start with accepting that a risk or that a problem might possibly occur if adequate care is not taken. But, the process of defining and identifying risks or potential failure nodes is dependent on several factors such as the context and scope from which the risk is considered that could make it difficult to have a one fit-all approach. As such, the process of defining risk is treated as analytical constructs. Hence, in Case A, risk definition and identification is in essence usually in the traditional cause-and-effect format. This is in line with Weick's (1995) belief that problem solving technique (which includes risk definition and identification) is highly commonsensical and even more result-driven when backed with real data. In summary, risk identification is directed towards "*identifying probable dysfunctional occurrences*" ... risk definition entails "*classifying identified risks into groups based on the extent to which they impact*" on the organisation after which... "*root cause of each grouped risk is determined*" (Executive Director, JVO). An illustrative diagram showing the cause and effect analysis is presented in Figure 52.

Figure 52: Risk identification, classification and analysis in Case A.



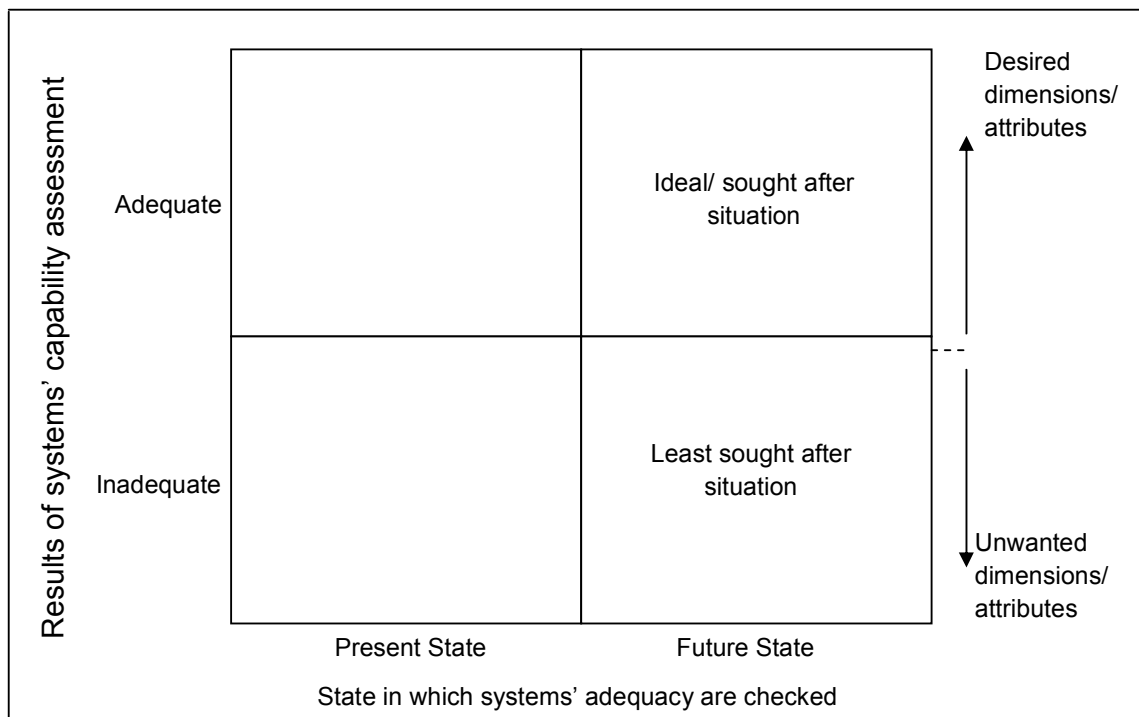
ii. Systems Evaluation

This is performed in anticipation of the organisation-wide changes. It is synonymous to performing reality checks to ascertain the system's capability (in terms of operational, managerial, physical capabilities) to achieve the desired status as well as ability to sustain changed procedures. Furthermore, it entails carrying out a comprehensive review of the processes in-place in order to establish the competency levels and necessary add-ons required for buffering up these processes through an elaborate process mapping detailed to achieve preset goals. Ideally, the results of systems' evaluation are used to promptly determine whether organisations are at least capable of successfully implementing proposed organisation-wide changes. As such, right from the onset, organisations are able to conclude whether the planned organisation-wide change is possible and feasible well before starting.

In Case A, systems' evaluation is usually performed in relation to: (a) determining the appropriate culture; culture in this instance is simply how things are generally carried out in case organisation; (b) identifying whether the existing organisational structure can bolster the success chances of the implementation; (c) evaluating the extent to which existing processes would have to change; and (d) appraising competency gaps of the organisation as a whole and in the direct target-users of the resulting

changes planned. To explain this better, taking a cue from Case A, organisations need to assess the adequacy of their systems as said in terms of existing culture, structure, degree to which existing processes must be changed and employees' competency levels needed to sustain organisation-wide change for both present and future states. All components that indicate from the systems' capability assessment that observed systems are adequate, reveal the presence of desired dimensions or attributes, while inadequate systems' capability results are the unwanted dimensions or attributes; see Figure 53 below.

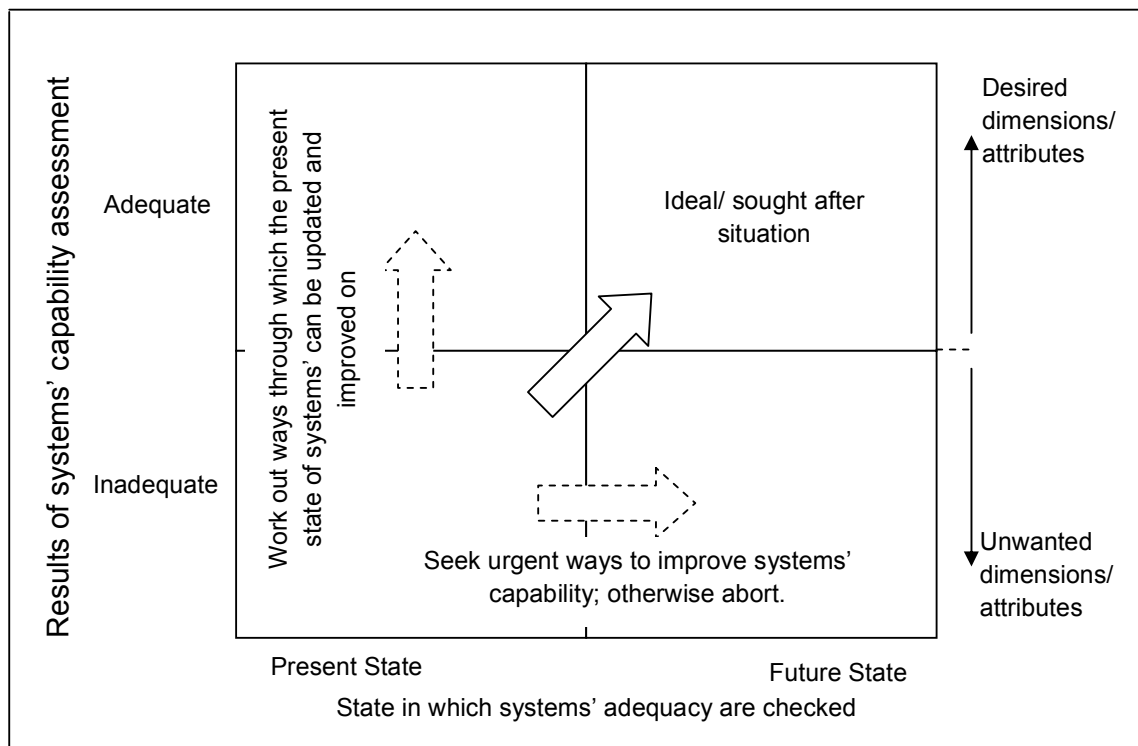
Figure 53: The use of systems' capability assessment results



The systems' capability test results would either indicate that the present state of the adequacy of systems is either inadequate or adequate. In the first instance, that is when the results of the systems' capability suggests that the present adequacy state is inadequate, the overriding or ideal intention will be for change agents to improve on the systems' adequacy so that the future state can support or sustain planned organisation-wide changes. In other words, the onus is on the change drivers to develop absorptive capabilities that can further enhance their systems' capability to

successfully implement planned organisation-wide changes. From this, as shown in Figure 54, two possible implementation pathways are evident. The first option will be for organisations to seek out ways through which their current capability can be improved and extended until it is certified to be at an adequate status. Thereafter, the systems' capability is maintained while the organisation still continues to seek out ways the systems can be further enhanced.

Figure 54: Moving from a present state of inadequacy to a future adequate state



The few accounts of how case organisation A attempted to build resilience into their changing systems were used to establish actions on how organisations can develop newer core competences and capabilities sufficient enough to withstand disruptions and at the same time maintain adequate levels of systems capability in the future. As regards moving from a present state of inadequacy to a present adequate state, exemplary ways through which existing culture in the organisation can be raised to a level that will enable the organisation to adequately sustain planned organisation-wide changes include the following:

- i. Identify existing culture. This includes how employees would customarily perform their work with minimal or with no direct supervision, knowing employees' perceptions and expectations and understanding individual differences of organisation members. For instance, in Case A, a team-oriented mind set was said to be preferred by non-managerial employees especially for high-end projects not just because of its benefits, but since it creates a sort of protection haven for them should projects fail (Manager, Upstream Ventures). Hence, the challenge is often how to compose effective teams. Similarly, another case of identifying existing culture, found during the pilot study, it was suggested most workers work harder when supervised directly by superiors. In other words, they only pretend to work hard when their bosses are around or involved in projects, but relapse into a lackadaisical attitude once their bosses' involvement or physical presence wanes and becomes less felt. This further confirms that on average, employees dislike their work, avoid responsibilities, and so their choosing to work is borne out of their perception of loss (McGregor 1960).
- ii. Analyse and compare the existing culture with enabling conditions that would make organisation-wide change successful. At this point, arrange discussions with organisational members on important issues that influence the proposed transformations in order to get employees' justifications. After that, work to resolve the differences accordingly. Maintain effective communication till all the differences are resolved.
- iii. Arrange occasional team building exercises. Team building should be both on-the-job and off-the-job. As regards on-the-job team building, the responsibility is mainly on organisations' management. They must strive to create a healthy working environment which employees see as been unbiased, socially responsible and impartial in conflict resolution (Executive Director, Services). For example of off-the-job team building, employees' preference of what activities they would desire should be used in designing retreats.
- iv. Train your employees by getting ready for the future adequate state. For example, for technological-based organisation-wide systems' changes, the target users literacy, computing skills and knowledge levels must commensurate with the skills needed to operate the newly implemented or

adopted technological-based organisation-wide systems. For example, in Case C, the Clinic had to opt for a less advanced X-ray machine because only two of their staff in the Radiology department were believed to have the right competency level to operate more advanced machine they acquired. For those types of employees who might have basic knowledge, they should be further educated on what needs to be done, how it should be done correctly, why it is done in such an approach, by stressing on the risk that might occur if it is not done right and lastly, what is expected of them (i.e. results, conduct and so on) while on their future roles.

Extracts on enhancing existing structure are primarily centred on decentralising power arrangement and formalising all critical activities in organisation. As regards moving from a present state of inadequacy to a present adequate state, exemplary ways through which existing structure in the organisation can be raised to a level that will enable the organisation to adequately sustain planned organisation-wide changes are as follows:

- i. Decentralise the power arrangement. In Case A, the organisational structure is flattened out during major organisation-wide changes. What this means is that less senior employees' assigned as change drivers are empowered to direct other employees, notwithstanding other employees' seniority (Assistant Manager, Gas). For instance, during one of the organisations' recent Intelligent Pigging (IP) of gas lines, an assigned safety officer halted the integrity checking exercise as soon as critical safety measures were breached, not minding any loss that might occur. When a review was carried out, the stoppage was indeed justified and so the employee was commended. Just as the Assistant Manager (Gas) puts it, such an approach "*helps bring some order into operations*".
- ii. Formalise all critical activities by ensuring all activities are consistent. All operations must be in adherence to specific job standard procedures. Before each start, appropriate authorisations should be sought and such authorisation from the appropriate persons is given once a comprehensive risk assessment result is attached. Also, the persons involved in undertaking the job must acknowledge that they understand the consequences of their actions when they are at it. Although this might end up being seen as monotonous, too

bureaucratic, life-draining, *“the benefits outweighs the aftermaths for not having such a procedure in-place”* (Assistant Manager, Gas). Furthermore, one of the interviewees (i.e. Assistant Manager, Upstream Ventures) suggested that changes to critical daily operations should be regulated.

In other words, approvals must be obtained before these types of changes to critical components are carried out. The interviewee did, however emphatically express that this does not mean that flexibility should be traded in for rigidity. Based on the interviewee’s subsequent explanations, changes to operations can be of two types, namely: (a) changes to critical operations; and (b) changes to non-critical operations. Examples of changes to critical operations include deep-seated changes that affect the main approach through which work is performed, while changes to non-critical changes are peripheral transformations that rarely impact or completely alter organisations’ core operations. In Figure 55, the resulting effects, whether authorisation is required for either of the two types of changes, is summarised. The implication of this model is that organisations should balance and effectively validate when approvals for either types of changes should be demanded.

Figure 55: Resulting influence of seeking authority for changes

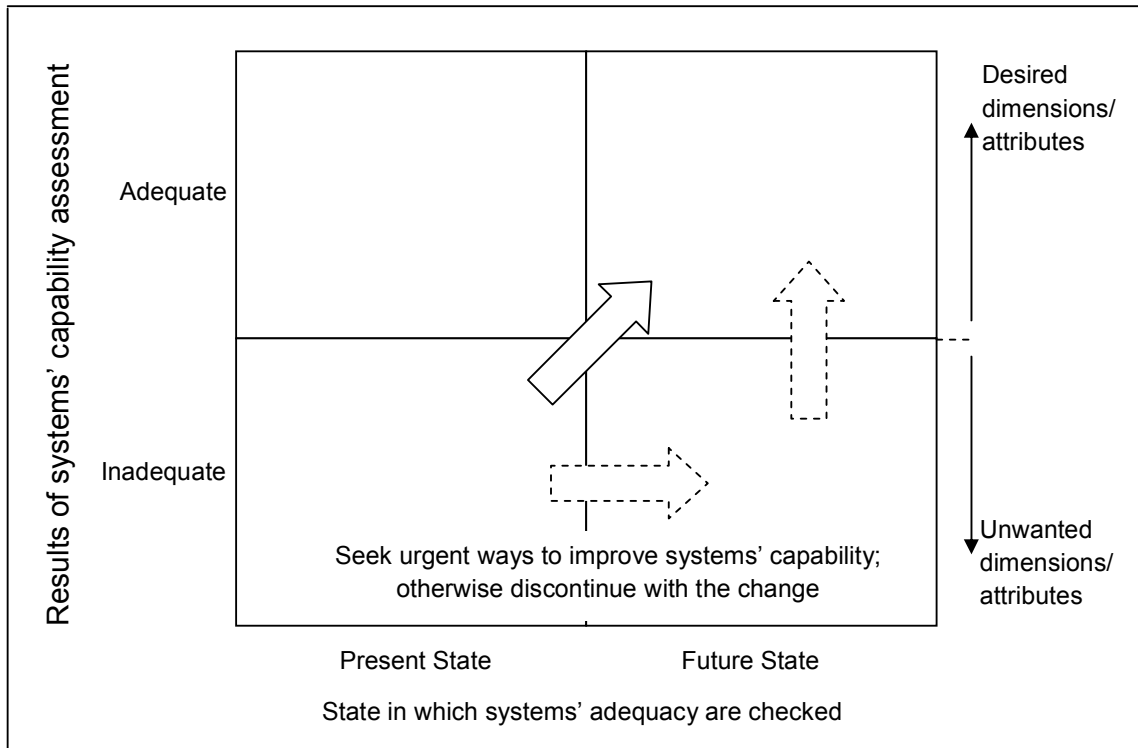
Identifying if authorisation is needed for proposed changes to systems	Needed	<ol style="list-style-type: none"> 1. Authorisation should be essential. 2. A business case needs to be developed, in order to justify the need for the proposed changes. 3. Enactment promotes standardisation of job procedures and routines. 4. Such approve encourages uniformity of appraisal techniques. 5. Supports employees' adherence to quality standards 6. Indicates existence of formal and established decision-making process. 7. Work progress can be monitored and easily tracked. 	<ol style="list-style-type: none"> 1. Approval should be restricted to line managers once budget or spending limit has been set. 2. Such changes that require approvals must be well-defined or else a hierarchical culture and mechanistic structure evolves. 3. More likely than not, employees would be restricted and less creative. 4. Creates delays in organisational process or system. 5. Show of dictatorial or paternalistic type of leadership. 6. Employees' rebellion is common, as they concentrate on developing avoidance strategies.
	Not-needed	<ol style="list-style-type: none"> 1. Decision-making is loosely structured or related strategy is not well-defined. 2. This would normally indicate that middle managements' actions are not co-ordinated. 3. Such instances depict a show of loosely framed reporting structure. 4. Occasionally, this leads to abuse. 5. Results in non-standardisation of processes, varied outputs. 6. Span of top managements' control is limited. 7. A too liberal chain of command would be present. 	<ol style="list-style-type: none"> 1. Employees' feel a sense of freedom and belonging. 2. Most of these changes are personal, therefore employees would likely feel some shared sense of responsibility for their own personal changes. 3. These are mostly common sense-based or ad hoc decisions. 4. Illustrates an existence of Laissez-Faire type of leadership style. 5. Usually a show of ordinary legitimate power. 6. Helps in inimising delays in workflow. 7. Lessens middle managements' work load.
		Changes to critical daily operations	Changes to non-critical daily operations
		Where the changes needs to be implemented	

The second implementation pathway

As shown in Figure 56, the alternative manner to move from a present state of inadequacy to a future adequate state would be to try to continue with the planned organisation-wide changes while organisations embark on investigating how to develop sufficient systems' capability that will be adequate to sustain changing systems in the future. This is difficult in that should the organisation fail to build sufficient systems' capability required to support or sustain the proposed organisation-wide, the whole attempt would have ended up being fruitless. Although in a real-life context, an organisation-wide change that was attested to go ahead having found that the results of the systems' capability assessment was adequate at the time the assessment was done, could at a future state could slip into this zone (Assistant Manager, Gas; Manager, Upstream). That is to say, as the change is underway management might need to resolve evolving systems' capability concerns.

The good thing, however, is that these concerns are easily isolated and tackled; compared to when from the onset, evidence shows that the future state cannot support or sustain the proposed change. For example, take the implementation of ERP systems, an organisation can quickly resolve the issue of training more employees' on how to use the system as long as early surveys have confirmed that the organisation has sufficient funds to successfully implement the system (even in the middle of the implementation) as compared to the organisation not having sufficient funds to start the implementation. Based on this, it is preferable to seek urgent approaches to improve the systems' capability right from the start of the organisation-wide project, or otherwise the project should either be totally aborted or suspended for a later time till when new systems' capabilities are developed for the organisation to be successful in the future.

Figure 56: Option 2 – From a state of inadequacy to a future adequate state.

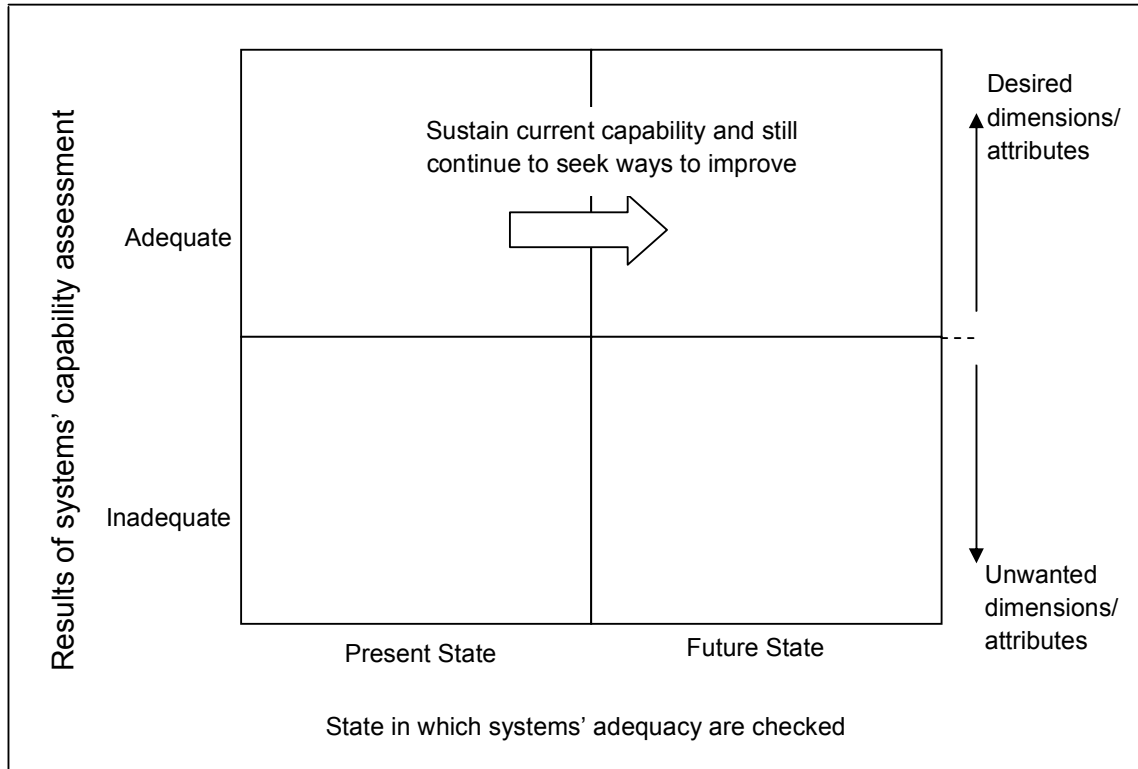


Maintaining and improving on a present adequate state in the future state

The process of ensuring that organisation's changing systems retain its attained adequacy or capability level of returning back to its pre-existing state post any significant disruptive occurrences within the shortest possible time essentially describes organisations' actions towards sustaining their current established capabilities while still exploring avenues through which current established capabilities can be improved upon or through which better capabilities can be built-in to changing systems; as shown in Figure 57. This quest would aid in providing answers to questions like: what is needed to be sustained and why it should be sustained? This is however subject to achieving a balance between two states. In this thesis, the first state is described as a state where organisations' seek to improve their level of preparedness to, or attain a state where they can sufficiently, deal with any unwanted happenings associated with the organisation-wide changes being implemented while the second state entails reducing the resulting extent to

which disruptions to changing systems would affect associated functions and organisations' core functions.

Figure 57: Improving on a present adequate state in the future state

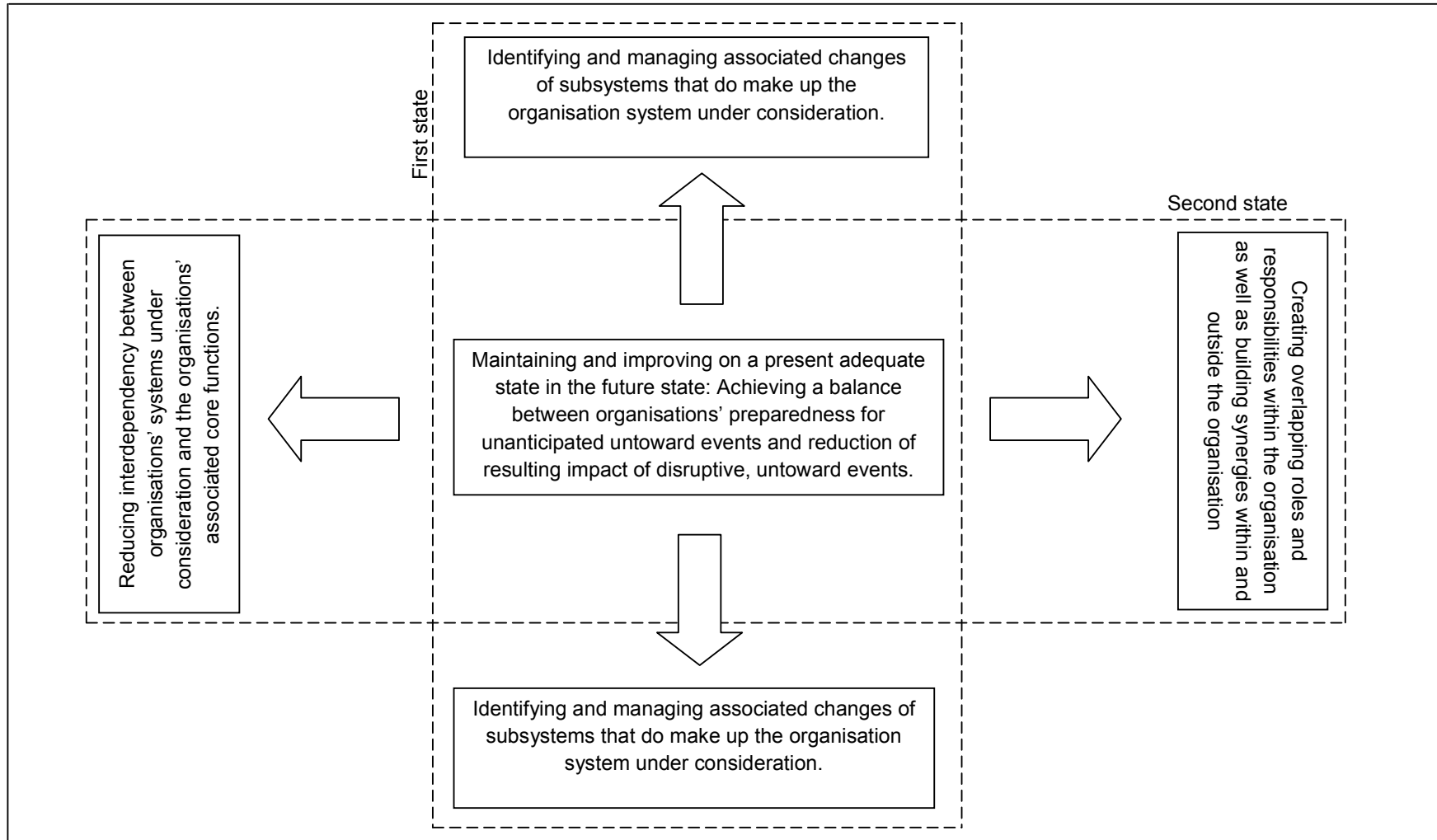


The first state has been widely expatiated upon in existing literature. It basically involves: (a) identifying and managing associated changes of subsystems that do make up the organisation system under consideration and (b) identifying and managing associated changes of subsystems that do make up the organisation system under consideration. Therefore, the key objective of the second state is dependent on change agents' understanding that organisations' systems are on one hand a collection of other sub-systems and on the other hand, are in combination with other systems, subsystems that make up another organisational system. This is further compounded considering that major organisational changes results in often myriad of smaller myriad of compensatory actions required to keep the change going and at the end successful. In simpler terms, organisation-wide changes do not necessarily follow foreseeable and controllable linear inclinations but rather

habitually results in coupled nonlinear and sometimes non-preventive changes in linking systems. Having this in mind would help change agents rethink how to alter existing relationships, processes and structures (Assistant Manager, Downstream Ventures). That is to say, although organisation-wide changes might be the same, the concept of systems' dynamism and difference should be put under consideration so that each change is treated in-depth and entirely new... *"as much as possible"* (Assistant Manager, Downstream Ventures).

For instance, initially Case A decided to build Mega Fuel stations sometime in the Year 2000; across the six geographical regions in Nigeria. The idea of the Mega Fuel Station was conceived as an opportunity to enter the downstream of the Oil industry in Nigeria. Although the plan seemed to work out in the South Western part of the country, they encountered several logistics, safety, and human capability problems in the South Southern and Northern parts of Nigeria. Eventually, Case A had to suspend their expansion projects so as to concentrate on optimising the existing ones. As shown in Figure 58, based on a summary of the Assistant Manager, Downstream Ventures of Case A, organisations should be able to sustain, retain or improve on their present adequate compatibility level in the future by seeking to balance out the two states. Therefore, to conclude based on these assertions, benefits of Systems' Evaluation include but not limited to: (a) determining system's susceptibility to changes; (b) applying in principle the concept of impact analysis; (c) adopting results as input for contingency plans; (d) acting as a stimulant to determine the state of urgency for initiating organisation-wide changes; (e) determining the viability of the whole organisation-wide change process and (f) evaluating the amount of resources needed to be committed to the change project in order to verify the extent to which the system is capable and conducive for successful implementation and eventual upgrading of organisation-wide changes when the time comes.

Figure 58: Key summary of how to retain or improve on an organisation's present adequate state in the future state



iii. Develop mitigating or corrective actions

Developing mitigating or corrective actions in, Case A, involves the adoption of traditional problem solving techniques. Basically, the outcomes of the earlier two processes – that is, (a) risk definition, identification and assessment and (b) systems' capability investigation, is combined. These two processes, somewhere along both exercises, overlap. Defined, identified and assessed risks serve as inputs to systems' capability investigation in that the systems capability to prevent such risk from occurring is also examined. A case of *"if it does happen, how will it impact"* (Assistant Manager, Downstream Ventures) organisation is performed for every risk identified, defined and assessed. Responses to this type of questions are then used in developing mitigating or corrective actions.

How smaller organisations attempt to build-in resilience into changing systems

In small and medium sized organisations (in this case, Cases C, D, G, H and I), there is really no ready-prone assessment tool for examining the success extent of changing systems during on-going organisation-wide changes. Solutions to problems are proffered as soon as the organisations encounter problems. This is probably due to the fact the power to make strategic decisions usually lies with the owners and partners of the types of organisations. As such, the process of building-in resilience into changing systems starts and ends with the business owners and so these organisations tend to suffer when these individuals are away or indisposed at the time they are needed. In such an instance as it was in Case I, a scheduled production run was almost disrupted just because the Editor in Chief was away at a time to-be published files were corrupted. Unfortunately, there was no back up of the files. The problem was further compounded considering that most of the columnists were freelance. After this incident happened, duplicate copies were created. A dedicated email account was created, with two or more persons having the password to the email, and finalised files sent to the email address before the magazine issue is run. However, the process of rescinding power to operational staff proved counterproductive in another case investigated.

In Case D, the organisation is undecided on gradually abandoning its strategy of training its staff or continuing with such strategy. It costs the organisation a lot to do this but *“have little to show for it”* (Managing Director, Case D). The reason for this is that employee turnover is very high (Managing Director). In addition, in times past, their well trained technicians were caught doing *“private-practice”* (Workshop Supervisor). Explaining this further, these technicians approach both current and prospective customers enticing them with offers of having the same service performed for much reduced rates. As expected, these customers accept the offer and they decline the service of the organisation. The technicians then schedule another day and arranged place to carry out the service. On the arranged days, the technicians collude with the administration staff to come with fake call-outs. This was undiscovered by the organisation and so the final approval for call-outs was made the responsibility of the Sales Manager. As such, *“every call is now confirmed”* (Sales Manager) since it is the Sales Manager that arranges and schedules call-outs. But recently, the technicians have devised ways to beat the system again (Workshop Supervisor). Now, the technicians on call-outs use their call out days for their private practice.

Based on these accounts, it can be assumed that employees' qualities and behaviours can be detrimental to organisations' effort to build-in resilience into changing systems. There is evidence to back up this claim from accounts of the management staff interviewed in Case E. Although the organisation does recognise the need to expand, this is not the priority, the primary focus of Case E is to develop reputable persons that are well-versed in problem solving and developmental approaches (Manager, Business Advisory Services). To do this, prospective employees are put through rigorous selection process. Attributes that are needed included these individuals' energy level, ability to work under pressure, dependability, self-organisation, attitude, good recommendation from previous employers or references, maturity and common sense, communication skills and team working abilities. These are important because the employees eventually *“assume positions of leadership in clients' offices and... also as ambassadors of the firm, the reputation of the organisation must be preserved”* (Managing Director). The main challenge of the organisation is how to optimise existing communication and

reporting lines for consultants posted to their clients' offices. This includes when and how established protocols in Client's offices can be changed and how frequently these consultants need to relay these amendments back to the office without coming across as novices (Manager, Asset Management).

As such, one can say that the problem of building in resilience into changing systems therefore lies mainly in how management can establish controls and continuously synchronise all their organisations' activities. In Case E, with recent management changes in the Nigerian Stock Exchange, the organisation decided to carry out significant organisational changes; one of which was to dump their accounting software and implement SAP. Before, all the finance department had to do was send in monthly reports to management, but now with new regulations, the organisation is mandated to submit regular reports to the Stock Exchange. As expected, SAP contractors were engaged. Although, they had issues with the implementation as the initial contractor had to be disengaged and another consultant appointed before success was achieved, the major problem was how the newly implemented SAP system could be synced with the organisation's core functions. Initially, almost all employees that work on the reports could input data into the system. Soon, it was discovered that the organisation was less able to track changes. So, the organisation tightened up its controls. As at the time the research was undertaken, each department works individually on the reports and come up a unified department report. These departmental reports are then inputted into the central SAP system. Subsequent changes need to be approved by department leaders before such changes can be made. Although this has worked, the challenge now is how to create uniform platforms which departments can use in generating their reports within the SAP system.

Each of the two partners in Case C attributed their success ratings to the due fact that their employees "*know what they are meant to do in many instances*" (Managing Partner I). When the Clinic's sectional heads interviewed (that is, the Chief Radiologist, Pharmacist, Matron and Finance Manager) were asked whether their subordinates know what is expected of them in most instances, they all answered in affirmative. The Matron explained that newly recruited nurses have to shadow

nurses already employed irrespective of the fact that they have one or more years of experience after their nursing schools. That is, assumptions are not made about newly recruits as they are most times taught afresh of what of expected of them (Chief Radiologist). More so, employee turnover is low. Each of the clinic's sectional heads has spent an average of 12 years working the Clinic. In addition to this, these sectional heads are given the freedom to work out how they want to carry out their duties. This has double-edged advantages. On one hand, it is allowed because it gives the sectional heads *"a chance to exercise their influence"* (Managing Partner I). On the other hand, it is used to inspire the newer employees that their *"service and loyalty will eventually be rewarded"* (Managing Partner II). However, proposals for *"capital intensive activities have to be approved by the managing directors"* (Finance Manager) before it can be executed.

Surprisingly, the last two small organisations examined do not have the same problems as Case D. Apart from the fact that both law firms are small in size, they still acted like the two large organisations observed in this study. They had formal and well-established means of meeting their daily obligations. Although the founders are now passive managing partners of each of these organisations (that is Case H and Case I), the day to day operations of the firm are now run by the sons of the founders. According to the two managing partners, they have further expanded the scope of their respective firm. For example, initially, Case G was mainly into Business Law but we now have associates specialising in mergers and acquisitions (Managing partner, Case G). Similarly, Case H has expanded its expertise from been the typical Divorce, Insurance, Injury and Personal Claims, Probate and Administrations lawyers to newer areas of practice such as Dispute Resolution, Capital Market Solicitors, Mergers and Acquisitions, and Taxation contraventions.

6.2.2 The process of building-in resilience into changed systems

None of the interviewees in any of the nine case studies directly suggested that their organisations have a different approach to building organisational resilience after organisation-wide changes. Their reasons for such vary. In some instances, it was considered too costly (as observed in Cases C, I and D). Having a different approach

for building in resilience after organisation-wide changes is further considered to be a distraction as such an approach would send the wrong signals to employees. This is because employees might *“assume that such an approach is being put in-place due to organisation’s inability to successfully implement the planned changes”* (Business Advisory Services manager, Case E). Just as it was observed that organisations’ have no distinct formal process through which they build-in resilience into changing systems, investigated organisations also do not have a distinct process of building-in resilience into changed systems. Three things occur after organisation-wide changes have been completed; (a) the project is either declared successful, (b) the project is deemed unsuccessful and rectifying course of actions are immediately put in-place, and (c) the declaration that the project is unsuccessful is delayed while management tries to continue to modify aspects of the change so that it can be eventually declared successful. One interesting thing observed across the nine organisations, and to note, however is that small and medium-sized organisations are faster to start implementing rectifying actions than larger organisations. In larger organisations, top management still continue tweaking the transformational changes being implemented. Generally, at later stages of the implementation if no consultant is being used, consultants are engaged not because they need to reappraise why the implementation has fallen short of expectations but to carry on with the implementation. The reason why they do so could not however be established with the framework of this research.

Summary of research finding:

Organisations seldom have well-defined and researched abandonment policies for failing projects. As a result, organisations are liable to lose more resources trying to rectify errors or projects that cannot be remedied at the shortest possible time. As such, this research recommends that organisations should endeavour to set up abandonment protocols pre-implementing organisation-wide changes. Therefore, the question is: does this however mean that organisations need to develop a formal strategy for building in resilience into changing systems? Findings from this research have shown that there is need to formalise resilience building attempts, and that top management should be seen as been involved. Although each of the nine

organisations considered had a clear understanding of what they wanted their change effort to achieve, large organisations are more likely to have such approaches formalised while in small organisations, it is often in the minds of the owners and partners and so employees' approval or request for involvement are rarely ever sought. Further research can be directed towards establishing why small and medium sized organisations seldom seek their employees input when carrying out organisation-wide changes and still end up being successful while large sized organisations that seek employees still end up having their employees resist such changes. In addition, it was observed that organisations rarely formally update their projects workability specifications as organisation-wide changes proceeds. It is only those that are in privileged positions or have the privilege of working on these change projects that are informed of alterations to the changes once the changes have started. In addition, from findings in this research, it is further established that the manner and approach through which large enterprises and small-medium sized organisations attempt to build resilience into their changing systems vary appropriately. Therefore, another question that needs to be answered is: is it necessary for organisations to develop an entirely new strategy through which resilience can be built-into changing systems?

Is there need for a different strategy on building-in resilience into changing systems?

From the analysis of all data analysed in this research, it is not really necessary for large organisations to have a separate strategy for building in resilience into their changing systems during organisation-wide changes as it will only result increase in employees' workload. However, it is mandatory for both large and small-medium sized organisations to ensure that the changes they are considering implementing has been well researched and a contingency plan is developed. Such strategy for building-in resilience into changing systems can be included into organisations' newly developed and existing contingency plans. As it has been explained in the case study organisations individually analysed, large organisations are very much aware of the need to act proactively towards being able to remain competitive amidst all operating conditions. As evident in this study, the large organisations considered in this study have sought out ways through which they can develop sufficient

resources as well as develop strategic oversight responsibilities that can enable them achieve this feat. Firstly, the resources and oversight responsibilities needed to mitigate or successfully eliminate developing problems are made to be readily assessed for each category of inherent disruptive events that can be identified, defined and assessed. Thereafter, all the organisation needs do is explore opportunities through which these resources can be optimised and effectively used. This can be most beneficial as the intent and severity of problems can be quickly addressed. One sure way to achieve this is create formal channels to provide sufficient information from which to articulate solutions.

As regards, small-medium sized organisations, the business owners should strive more at standardising their business operations as well as been more mindful of the need to create widespread awareness of their attempt to build resilience into their changing systems. Creating additional strategy for building in resilience into changing systems would amount to waste, repetition and creation of additional reporting lines. Some of the main challenges small-medium organisations encounter are usually daily-based and short-timed. Educating and helping business owners of small-medium organisations enhance their problem solving skills towards tackling these daily evolving problems will prove more beneficial than convincing them to develop long-term oriented strategies as daily survival is of major essence!.

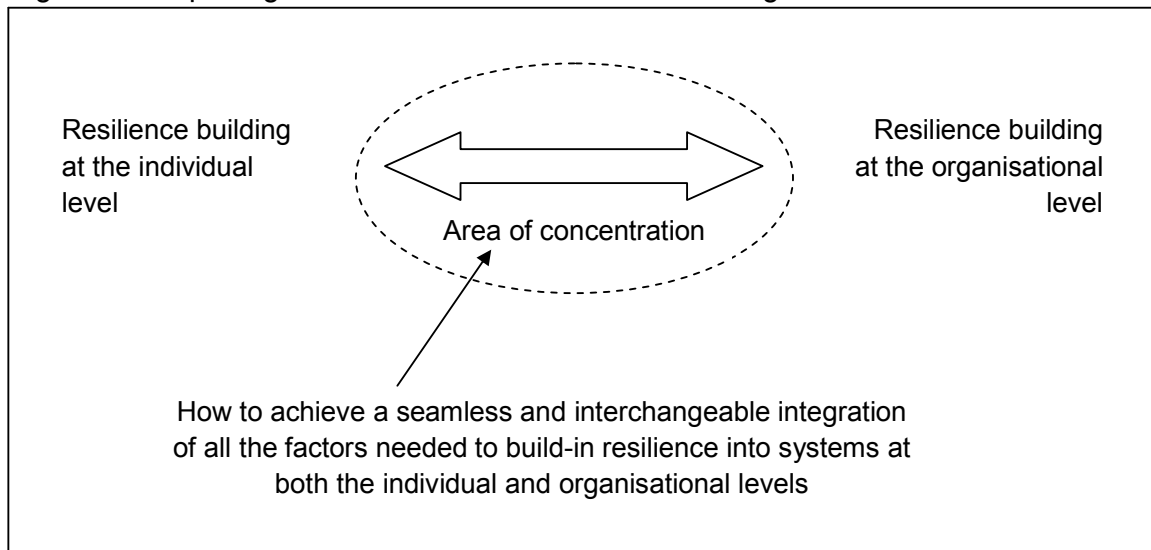
6.3 Levels in which resilience-building occurs

From the triangulation of all the data acquired at the pilot, survey and final interviews phases, on the process of building resilience into changing and changed systems, it has been identified that the process of building resilience into systems should be essentially performed at two levels, namely: (a) the individual level, and (b) the organisational level. Resilience building at the individual level comprises of employees' actions' and responses directed towards building, or ensuring that the organisations, remains competitive and operational. A lot of research has been conducted in this area. Across the nine organisations, there are established protocols designed to meet this requirement. On the other hand, resilience building

at the organisational level entails the development of modalities, processes or procedures with which employees in organisation can best adopt towards meeting their organisations' desire to remain competitive and functional.

In all nine organisations observed, each of the organisations had such a strategy in-place. Although existing resilience studies have explored in detail these two levels in which resilience can be built into systems in organisations, none of the studies has really attempted to sync both aspects. Hence, this section provides a discussion on how each of the five research themes relates to each of these two levels is provided. See Figure 59. At the individual level, three of the research themes namely employees' readiness to support on-going organisation-wide changes, the provision of social and individualised support and the use of stress coping mechanisms are vital while the other two research themes, the development of targeted organisational adaptive capacity and the existence of organisational resilience or systems' recovery mechanisms are important to building resilience at the organisational level.

Figure 59: Exploring the levels in which resilience building occurs



6.3.1 Resilience-building at the individual level in organisations

6.3.1.1 Employees' readiness to support on-going organisation-wide changes

At the individual level, as it has been shown in Case D, employees buy-in and readiness to support on-going organisation-wide changes is needed. To explain this better, this research compares its finding with Stryker's (1980) identity theory which says that, employees' resistance usually stems from their lack of understanding of change events; especially when there is a mismatch between organisational goals and individual goals (Schalk et al. 1998), high ambiguity regarding change (Ashford 1988) and sometimes due to employees' impatience as they would often seek visible short-term results rather than long-term results (Kotter 2002). In this research, it was observed that it was not the situation in all our investigated cases that employees' lack of understanding was an outright indication of employees' refusal to accept or support organisational changes. In these exception cases, employees' lack of understanding was primarily an in-between state, wherein employees sought further understanding of what the change was all about.

On the other hand, employees' refusal to come to terms with a change is often a more observable confirmation of the decision not to take part in the change; that is, employees' resistance to organisation-wide changes. As shown in the survey results in the earlier chapter, employees' resistance to change is more correlated with employees' non supportive behaviour than outright refusal to support on-going changes. Bearing this in mind, evidence from this study indicates that employees are programmed to survive and so will naturally stick with what has worked and has proven to be successful. Hence, the survey results show that employees fear of the unknown and belief that they will lose some of the benefits they presently enjoy increased significantly as employees' resistance heightened. Therefore, looking back at pilot study interviewees' responses and putting all things into perspective, this possibly explains why a number of the pilot study respondents mentioned that their employees resisted some of the changes discussed (Int.1; Int.4; Int.5; Int.7 and Int.10). This finding is in line with that of Black and Gregersen (2002).

In line with this, it is assumed in this study that the act of preparing employees so as to enthusiastically support organisation-wide changes is synonymous with organisations' creating readiness to change; which is similar to Balogun (2004a) and Schalk et al. (1998) assertions. As such, employees' readiness to support the organisation can be achieved according to Balogun and Hailey (2004a) by using a change equation originally developed by Beckhard and Harris (1987). The change equation is represented in equation (c).

$$C = (A \times B \times D) > X \quad (b)$$

In the equation, C represents the organisations' desire to get their employees to change and also support the proposed organisation-wide change. A is equivalent to employees' level of dissatisfaction with their status quo; which is described as ERPE in this thesis. This is probably the most influential (Schalk et al. 1998) but organisations should not force their employees rather they should be motivated to change (Ghilic-Micu and Stoica 2003) as forcing employees to change would create "*fear*" (Pilot Study, Int.8) in employees. B signifies the employees' desirability of the proposed employees' organisation-wide change which has been represented as PCB in this research and D stands for employees' recognition of practicality that the proposed organisation-wide change would result in substantial risk or disruption. The last variable in the equation, which is X, denotes employees' personal cost of changing and supporting the organisation-wide changes. In this research, X has been included as constructs used to assess PCB. Therefore, based on this change equation, literally, organisations can get their employees to change and at the same time support change processes by:

- i. getting their employees to become uncomfortable with their status quo through translating and tying the benefits of the change to personal gains while at the same time reducing the extent to which the change will disrupt their old routines; and
- ii. Reducing the loss of benefits which they enjoy, which translate to minimising personal cost of changing.

Earlier in this report in the literature review (Chapter 2), it was said that these two approaches are largely influenced and dependent on how individuals perceive the frequency of change, the planning involved and the impact of the change on them. This view was also held by Rafferty and Griffin (2006). It is therefore recommended that organisation leaders should continue to actively ensure that increased demands placed on employees as a result of the change are counteracted by acknowledging the significant effect of improving employees' desirability of the proposed change coupled with convincing employees that the proposed changes are a viable way of resolving the organisations' current problems as well as the need for employees to dissociate from their old routines. This view was also expressed by Balogun (2004a). But sadly, most of the techniques currently used to capture how employees' feel towards organisational changes fail to uncover the truth and thus only succeed in creating artificial changes (Beer and Fisenstat 2004). Because of this, in the next subsections, based on the scale items used to assess employees' readiness to support organisation-wide change, a brief account of how organisations can motivate their employees in order for them to support organisation-wide changes is presented.

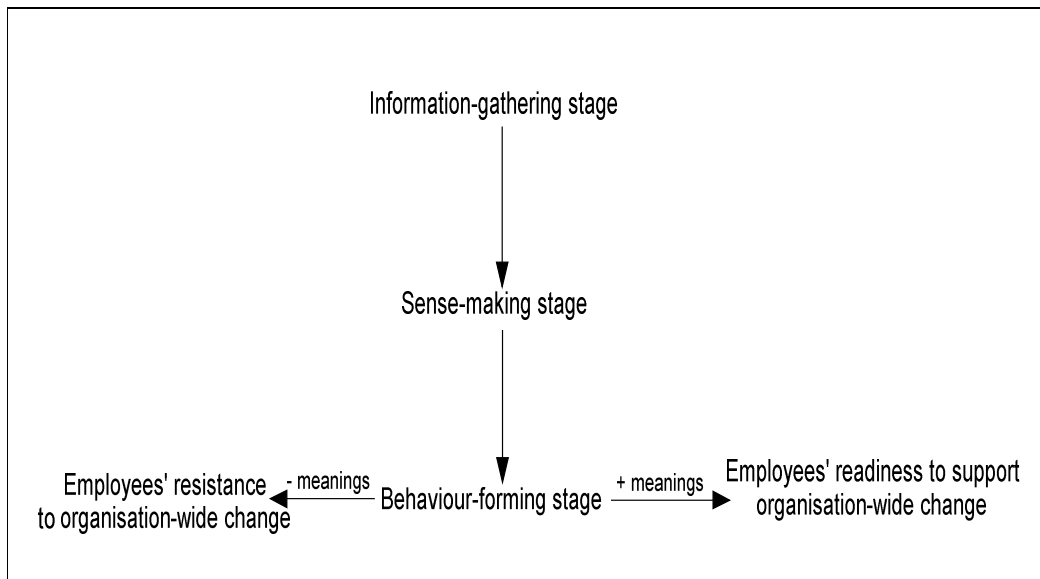
Employees' attitude based on Perceived Change Benefits (PCB)

As it has been reported in exiting studies emotions (Adams et al. 1976; Balogun et al. 2004a; Stuart 1995), it has also been confirmed in this research that individuals react differently to changes which may affect them adversely i.e. individuals exhibit varying behaviours. This concurs with Lazarus' (1991) explanation that the emotions of individuals change as the conditions of their lives change, such that emotions are by-products of an assessment of person-environment relationships. By implication, individuals consciously adopt self-attributing attitudes and motivation that enable them to be more reactive in their ability to perceive, understand and appraise the long-term implications of changes in their immediate surroundings on their personal well-being (Lazarus 1991). Therefore, from the analysis of the pilot study respondents, it was found out that emotions of individuals to organisation-wide changes can be broadly split into 3, namely: Employees' Resentment based on Past Experience (ERPE), Employees' Non-supportive Behaviours (NSB), and Employees' Non-interest (PCB8).

The following working definitions are used to describe these three types of behaviours. Employees' non interest is the explicit rejection or objection to change; non supportive behaviour is the implicit resistance to change, while resentment is the attitude of employees when the perceived change benefit is negative. Alternatively put, employees' non interest is an indifferent attitude to change which may largely be caused by unwillingness to move from a comfort zone routine. Non supportive behaviour is the explicit objection to or rejection of change while resentment is the implicit resistance to change. To expatiate on this, a three-stage model is developed. Based on the established correlations in the previous chapter of how individuals react to change and Blumer's (1986) three assumptions of symbolic interactionism, as shown in Figure 60, it is taken that employees would go through three stages.

The first is the information gathering stage; a stage where employees seek out detailed information about the changes being implemented. The second stage is assumed to be the stage where the actual interpretation of the information acquired takes place; that is, the stage where all information gathered are explained and then translated into useful information for understanding of the change. This means that employees would act on the basis of the meaning that the change has to them and as such they will try to acquire sufficient information that can help them comprehend what the change is about. Thereby, it is called the sense making stage. The last stage, the behaviour-forming stage describes the moment the individuals adopt a definite stance of whether the impending or on-going change would be beneficial or not to them based on the results of the processed information from the second stage. Two consequence behaviours of the behaviour-forming stage based on the deducted meanings, interpretations and conceptualisations of how the change would affect them were observed in this study. This is whether employees would accept to support organisation-wide changes or not. With regards to this explanation, getting employees to support organisation-wide changes is quite the opposite of employees' resistance to support such changes.

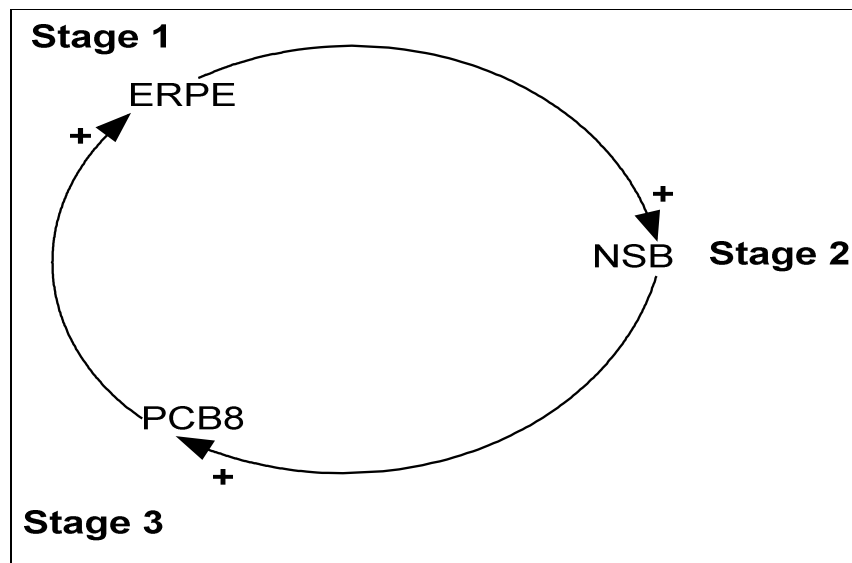
Figure 60: Comparing employees' resistance and readiness to support change



In the survey results, it was confirmed that employees' positive interpretations that impending or on-going change would result in personal gains has significant influence on the outcome of the individuals' assumed behaviour. (Similar claims were made by Furst and Cable 2008; also Moran and Brightman 2000). However, this not always the case, since an analysis of the survey results reveal that most employees in organisations do not naturally think typical organisation-wide changes will be beneficial. One thing to note however that PCB is not static; it is dynamic. Furthermore, based on the survey results, this research also establishes that, over a period of time, employees develop some form of resentment stemming from expectations based on their previous experience that similar on-going or proposed organisation-wide changes would result in some form of loss to them. Because of this, their approval of the change and willingness to fully participate in the change dwindles and thus they start to exhibit some form of non-supportive behaviours. Examples of non-supportive behaviours include but are not limited to being nonchalant (Pilot Study, Int.3), indifferent (Pilot Study, Int.7) and non-committal (Pilot Study, Int.8).

In literature, it is said that employees would not deal with their non-supportive behaviours to change by communicating their negative opinions with their supervisors (Schalk et al. 1998), but instead by changing their attitude to work (Schalk et al. 1998) and most times through incessant absenteeism or withdrawal intentions (Eby et al. 2000; Kotter 1996; Mathieu and Zajac 1990). These negative behaviours would undermine employees' contribution of their best towards the success of the organisation-wide change (Hammer 2007). Eventually, this will be expressed by an implicit resistance to the change. Therefore, the main challenge of how to discontinue the retrogressive process initiated by employees' attitude to changes is primarily centered on engineering their perceived change benefits from organisation-wide change to be predominantly positive even where the change seems adverse e.g. longer hours, higher productivity standards and so on. It also involves forcing them out of their comfort zones by enabling and motivating them to get involved. The retrogressive process referred to above is shown in Figure 61 and has been confirmed in the previous chapter.

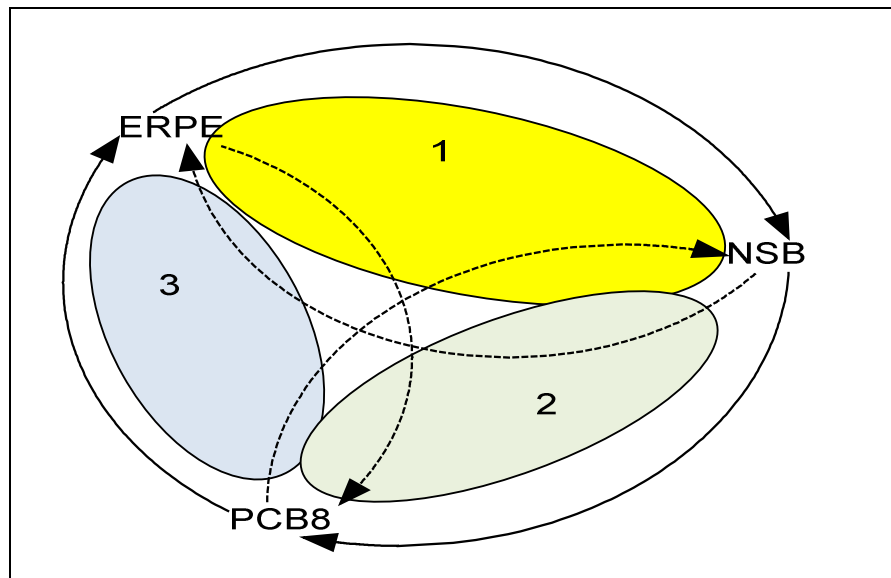
Figure 61: Causal diagram of employees' negative attitude to organisation-wide changes



Meanwhile, just as researchers have criticised that change-based models (e.g. Lewin's change model) are too linear and too simplistic (Balogun et al. 2004a), it

may be argued that the above causal diagram of employees' negative attitude to organisation-wide change is non linear and complex as these negative attitudes are not mutually exclusive of one another. Considering this in an applied context, employee' resentment based on past experience might not lead to employees' non-supportive behaviour, but result directly in employees' showing non-interest in the change. Likewise, a state in which employees are not interested in the organisation-wide change might not necessarily make them develop some resentment but instead directly result in them exhibiting non-supportive behaviour. In Figure 62, a more representative model of the retrogressive process based on employees' non-positive attitude is presented. However, this is principally based on the assumption that the process, by which individuals assess their immediate environments for change and subsequently alter their behaviours accordingly, is continuous and never ending process (Lazarus 1991).

Figure 62: Non-linear diagram of employees' negative attitude to changes



To illustrate this, three hypothetical groups of employees' are described. The first group of employees develop some level of resentment based on their past experiences which makes them to become non-supportive of changes and for subsequent changes, their non-supportive behaviour reverts them back to

resentment. This is represented by the process 1 in the diagram above. The second group of employees' non-supportive behaviour results in them losing interest in the implementation of the change (i.e. process 2). However, instead of their non-interest leading to resentment, it further reinforces their being non-supportive. In the case of the last group of employees, in process 3, as their non-interest deepens and develops to some level of resentment, it does not lead to them to being non-supportiveness of the change but rather makes them to be further uninterested in the change.

Assuming these employees' negative attitude to organisation-wide change continues, and the associations among employees' non-supportive behaviour, resentment and non-interest in the change correlates significantly as seen in Figure 5.6 in the previous chapter, there is therefore a possibility of employees' crossing from exhibiting one attitude to the other such that resentment may lead to non-supportive behaviour or non-interest; non-interest may end up in resentment or being non-supportive and being non-supportive may lead to resentment or revert to non-interest. This process can however become complicated if left to go on for a long period of time. At this point, the preceding and the next-to-be adopted behaviour become untraceable and unpredictable. In summary, employees' non-interest in their organisations' ability to successfully implement organisation-wide changes, employees' non-supportive behaviour and employees' resentment based on past experience have influence over one another (Hypothesis 1). Hence, change agents are to be cognisant of this fundamental association. Going by this, it is essential that organisations have in-place a formal and open channel through which information is fed to employees as the change progresses. The need to have an effective communication system is discussed in the next subsection.

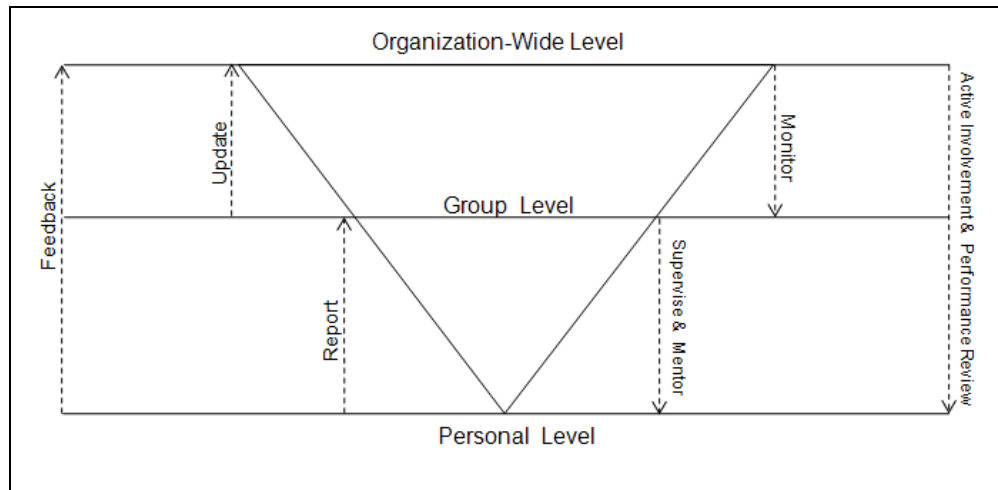
Effective Communication (EC)

During this study, it was observed that each of the organisations examined had some form of communication channel in-place. Although the interviewed staff did not directly link effective communication as one of the success factors for the organisation-wide changes, their accounts and responses highlight it was. In

between these responses, sentence like: “we had to inform those employees...” (Upstream Ventures Manager, Case A); “...emails were sent...” (Business Advisory Services Manager, Case E); “...because the new employees have to have to understand...” (Managing Partner, Case C) and “...employees must have access to information...” (Information Technology Manager, Case B), suggest that effective communication is an important aspect of successful organisation-wide changes. Many researchers have also expressed this opinion (Macaulay 1996; Perrin and Valla 1982). Thus, organisations’ effort to make communication effective is therefore essentially an attempt through which communicative activities in organisations can be optimised (Coughlan and Macredie 2002).

In view of this, across the case organisations, organisations’ effort to achieve effective communication are primarily the ability of organisational leaders to put in place means of getting ideas or information across to employees in such a format that every employee understands. This has been observed to be 2-way system; that is a top-down and a down-up approach. These two approaches are presented in Figure 63. From an organisation-wide or corporate level, which is the top aspect of the top-down approach, senior management staff’s roles largely consists of overseeing and monitoring middle managements functions. This is based on senior management statements across the nine case organisations. Examples of such phrases include senior management staff keeping “...*an eye on*...” (Executive Director Services, Case A) or keeping “... *tabs*...” (Engineering and Technical Services Director, Case B) on direct reports. At the mid-level represented as the group level in the Figure, middle managers functions are essential directed towards “... *supervising the day-to-day activities*” (Seismic services manager, Case B), “*mentoring*...” (Head Contracts, Case G) subordinates and “updating the partners” (Head Dispute Resolution Department, Case H). At the personal or the down phase of organisational communication system, employees principally perform their assigned tasks and report back to their seniors.

Figure 63: Top-down and Down-top organisational communication styles.



Based on this diagram, organisations' effort to make communication effective is dependent on two factors namely; (a) the challenge of communicating the appropriate messages in a rightful manner and (b) the challenge of empowering the information receivers to receive and understand the transmitted messages. As regards the first challenge for example in Case A, misinformation during Intelligent Pigging (IP) of gas lines can be disastrous; that is to say, the right pressures must be recorded and, in relation to the second challenge, well engineers must clearly understand the implications of the varying pressures. Hence, for both challenges, it would benefit organisations to set up clear established channels of communication in organisations that enables employees have access to information, know what the information implies, why the information is available and be able to personalise the information to their advantage. Essentially, this buttresses a leaders' ability to accurately grasp the essence for the change project, project a vision of the future or the consequences, and decide on the action needed to realise the vision (Nonaka and Takeuchi 2011).

In literature, the degree to which employees are aware and informed of organisation-wide changes matter is considered so important and often assumed as the main enabler to the extent that low levels of employees' cognisance of organisational changes have been found to result in negative attitudes such as cynicism (Bommer

et al. 2005; Wanous et al. 2000). Employees' cynicism is an attitude consisting of the employees' assumed futility of the change along with a loss of faith in those who are responsible for the changes (Reichers et al. 1997). Wanous et al. (2000) highlighted that employees' cynicism about organisational change is a pessimistic viewpoint about such change efforts being successful because those responsible for making the change are blamed for being unmotivated, incompetent, or both. Bommer et al. (2005) reported that organisational cynicism is a complex attitude that negates cognitive, affective and behavioural aspects resulting in increased beliefs of unfairness, feelings of distrust and related actions about and against organisations; which is usually caused by lack of sufficient communication (Dean et al. 1998).

Although, established relationships in the previous chapter have established that effective communication can increase employees' readiness to support organisation-wide while at the same time minimising employees negative behaviours such employees' resentment or cynicism as the case maybe, the researcher could however not ascertain whether employees' resentment or cynicism is towards their managers or their organisations as a whole. But what was evident across the nine organisations was that employees hardly carry out managers' instructions the first time they are told; hence there is a need for managers to always follow up. This observation was also recently confirmed in another study (Neeley and Leonardi 2011). The results this similar research indicated that, most times, in order to ensure that their employees carry out their delegated functions, their managers had to say the same thing twice or more (Neeley and Leonardi 2011). It would thus be worthwhile to have a research that seeks to establish whether subordinates decisively decided to ignore their managers due to their resentment, non-interest, non-supportive behaviour as this was outside this study's scope.

Across the nine organisations, employees' inability to talk openly about deep-seated issues that affects them was found to be common; the average mean of the construct used to assess this was 4.1 across the nine organisations. Hence, this further upholds the argument that employees' inability to talk openly about deep-seated issues that affects them remains one of the main roadblocks which make it difficult for organisations to implement organisation-wide changes (Beer and

Fisenstat 2004). In available reports from existing studies, employees' openness, especially to change, is regarded as an inverse of employees' resistance to change (Anuradha and Kelloway 2004; Armenakis et al. 1993). Wanberg and Banas (2000) suggested that openness to change is a factor of employees' willingness to change and positively affect the change. In other words, employees' openness would possibly serve as an indicator of such employees' receptivity to change (Pasmore and Woodman 1997). This explains why organisations' effort to make their communication effective correlated significantly and positively with provision of opportunities to employees to freely express themselves which in return relates appreciably with employees' readiness to support organisation-wide changes. Based on this, one can assume that organisational changes will probably be unsuccessful until when employees are provided the opportunity to express and envision what the change means to them as individuals and as a team member (Check also, Hunting and Tilbury 2006).

One reason for this is that *"it's harder to move towards a goal when people haven't been provided with an opportunity to take time out to envision what sustainability means to them separately (as individuals) and together (as a team or organisation)"* (Hunting and Tilbury 2006). The case by case analyses reveal that examples of attributes of organisations that allow their employees to express themselves freely include the express display of managements' vested expressions backed with visible actions of their: (a) willingness to listen to, and empathise with, employees (b) utmost commitment to engage stakeholders in all dealings that affect them, (c) disposition to give up something of value in order to receive employees' support, and (d) ability to recognise that ethical values and norms, interdependence, commitment, and adaptation are crucial for the creation, development and enhancement of a positive, sustainable long-term relationship. So, the provision of opportunities for employees to express themselves freely should however not only be applicable to the non-managerial staff; the managerial staff should also be encouraged to create opportunities for themselves to communicate and learn from one another (Nonaka and Takeuchi 2011). The provision of opportunities for employees to express themselves freely has been found to be critical and essential to getting employees to support organisation-wide changes as it helps to create a sense of shared contexts

and purpose just as other studies have also indicated (See also, Nonaka and Takeuchi 2011). Hence, the higher the effectiveness of communications style adopted as regards organisation-wide changes, the lesser chances that employees will have negative attitude towards the organisation-wide changes (Hypothesis 3).

There are many ways through which organisations can create conducive environments that can motivate employees to express themselves freely; one of which is how organisations' are structured. Generally, organisations' structures are either organic or mechanistic in nature depending on the level of predictability that exists in their immediate environment (Burns and Stalker 1961). In turbulent environments, organisations have been observed to have organic structures that support horizontal coordination and interactions while organisations that operate in relatively stable environments have mechanistic structures (Burns and Stalker 1961; Sine et al. 2006). According to Kirkhaug (2010), organisations that are organic in nature are more likely to give their employees the freedom to express themselves across the organisations more than those with mechanistic thereby allowing them to have more efficient communication than mechanistic organisations that rely on formal and vertical channels of communication.

Contrary to this expectation, it was hard to confirm this judgement in this research. This is because available evidence from this research tends towards proposing that organisational structure does not certainly influence employees' willingness to express themselves freely. The reason being that average mean of employees' willingness to express themselves in Cases A and B which had a mechanistic structure were above 3.5 while the average mean of the employees' response for the same construct in Case E was less than 3.0 which seemed to have an organic structure. Other factors such as employees' loyalty and employees' affective commitment to their organisations were found to relate considerably and positively with employees' willingness to express themselves freely and employees' continued belief in an organisation. In this study, employees' continued belief in an organisation, referred to as employees' retention and obedience to management, was assessed as a component of employees' loyalty. In the next subsection, how

employees' loyalty is discussed in relation to employees' readiness to support on-going organisation-wide changes.

Employees' Loyalty (EL)

Going by the account of Case D, presented under how organisations build-in resilience into their changing systems, employees' loyalty is a crucial factor to ensuring that organisations are successful with their change attempts or resilience-building endeavours. As regards, employees' loyalty can be described as employees' preparedness to abide with the organisations' laid out practices irrespective of their evolving circumstances. In other words, this shows employees' strong feelings of attachment and unwavering desire to continue working for an organisation while also desiring to put extra-roles so as ensure the organisation remains functional suggests such employees' are loyal to their organisations. It is evident from this study that employees' loyalty might greatly be enhanced by such as factors of employing old and mature individuals, ensuring that employees' is low, employees' continue to feel challenged in their current roles and associated benefits are commensurable, improving the literacy level of employees and tightening up too relaxed control span of managements in case organisations. The most pronounced factor attributed across the nine organisations was the use of religion as a pre-determinant to employees' loyalty.

Almost each of the 35 senior management staff from the case organisations linked employees' loyalty to religious stances when asked why they think some employees are more loyal than others. For example, employees' that have "*fear of God in them*" (Workshop Manager, Case D), and "*... responsible and religious*" (Editor in Chief, Case I) were said to be more loyal than others and would remain continue loyal irrespective of the circumstances. As such, the general belief is that this set of individuals understands that "*what goes around comes around*" (Managing Director, Case D) and so they "*treat the business as if it is their own ...knowing fully well that what they do here, others will do to them too ...when they start they businesses*" (Managing Partner I, Case C). Although this sort of ideology cuts across management staff in both the large and small-medium sized organisations observed,

it is more put into words or expressions in small sized organisations. This is in contrary to research findings that state employees' allegiance to organisations wanes in instances where employees perceive that their workload is not complimentary of their wages or when they are convinced that their organisations are not concerned about their long-term employment and goals (Davis-Blake et al. 2003). In line with this, findings of this research rather suggests that religion-induced loyalty will contribute to employees' perceived and prolonged obligation to continue working for their organisations more than other manually induced loyalty that is expected to decrease over a period of time (Robinson et al. 1994) once these factors are removed as employees generally end up feeling betrayed (Morrison and Robinson 1997).

Although religion-induced loyalty has been found to be a huge contributor as to why employees are more loyal, it is not enough to sustain such loyalty. Evidence from the survey indicates employees' sincerity and perceived allegiance to organisations is relatively important also. These two factors contribute to employees' feeling that their psychological contracts are been fulfilled. Psychological contracts, in this case, represent employees' belief covering all perceived reciprocal obligations between them and their organisations (Morrison and Robinson 1997; Rousseau and McLean Parks 1993). However, managers perceived inconsistency correlated significantly with employees' non-allegiance to their organisations; thus further affirming that managers' actions do not often match their words (Nonaka and Takeuchi 2011). There are studies that have confirmed this also; based on the fact that employees' relations with their managers have been found to have significant effect on employees' loyalty (Davis-Blake et al. 2003). But, care should be taken not to confuse employees' loyalty with their absolute or complete tolerance since employees' loyalty does not necessarily mean employees' sincerity. Employees' sincerity is deep-rooted construct that is rarely expressed. Further research can be targeted at devising appropriate on-the-job not a moment way for assessing employees' sincerity.

This implies that, as this research's pilot study findings has revealed, even though employees' sincerity might be an indication of employees' loyalty, the difference

between the two is more recognised when employees when are faced with adverse, life threatening conditions. According to Corvino (2002), it is more of employees' loyalty when employees still carry on wanting to work for their organisations in this kind of situation. In other words, this is characterised by employees' willingness to go beyond that which is normally expected on behalf of their organisation just so that they can remain employees of their organisations (Porter et al. 1974a). In summary, employees' loyalty can be seen as a product of an exchange of employees' increased affective commitment to organisations despite their prevailing conditions and organisations' assured ability to fulfil promises as well as improving employees' satisfaction (Atkins et al. 1996; Morrison and Robinson 1997). In the next section, employees' affective commitment to their organisations is discussed.

Affective Commitment (AC)

Employees' commitment to organisation is a multidimensional concept (Meyer et al. 2002) and so it is deduced to be a more global construct that reflects employees' emotional response than job satisfaction (Mowday et al. 1979). In view of this, employees' commitment is widely thought to relate to the relative strength of an individual's identification with and involvement in a particular organisation (Mowday et al. 1979; Porter et al. 1974b). Typically, it outlines employees' level of relationship and attachment (i.e. both professional and personal) to their organisations; and so it has long been established to be a crucial variable that can be satisfactorily used to understand the work behaviour of employees in organisations (Mowday et al. 1979). Thus, organisational commitment is delineated as the extent to which employees' identify with and get involved in their organisations (Porter et al. 1974a) or simply *"that which is directed toward one's organisation"* (Mathieu and Zajac 1990). Generally, existing studies directly or indirectly offer similarities between employees' behaviour and attitude in the organisations (Mowday et al. 1979) by broadly grouping organisational commitment into two, namely attitudinal and behavioural commitments (Mathieu and Zajac 1990).

In an attempt to explain this better, Meyer and Allen (1991), Meyer et al. (2002) and Brown (1996) conceptualised that employees' attitudinal commitment to organisation

is of three types; which are: affective, continuance and normative commitment. According to Meyer et. al. (2002), and Porter et al. (1974a), employees' affective commitment is anticipated to have the strongest relational association with commonly desired positive measures of work related attitude or behaviours (e.g. improved on-the-job performance, attendance, employee health and well-being and so on); continuance commitment ranked in second while normative commitment in most cases would come in least out of these desired work behaviours. This is largely based on the assumption that commitment (i.e. affective commitment) is developed as a result of individuals' understandings of work experiences that best matches their aspirations (Meyer and Allen 1991). In continuation of the researcher's argument, employees' positive perception of change benefits in terms of job satisfaction, trust in managers, reduced employees' withdrawal behaviours or employees' prolonged intention to remain in their organisations, can be bolstered by working towards the improvement of employees' affective commitment (Machin and Fogarty 2010; Meyer and Allen 1991; Neves and Caetano 2009; Porter et al. 1974a; Shum et al. 2008; Somers 2009; Sung 2007).

In the research, the average mean score for all the constructs used to measure employees' affective commitment to their organisations varied significantly across the nine case organisations. The reason for this could not be determined within the timeframe of this research. However, across all the nine organisations, the scale item *"I talk up to this organisation to my friends as a great organisation to work for"* correlated the most with affective commitment; thereby explaining why the scale item *"I am proud to tell others that I am part of this organisation"* correlated the second highest. Results from the correlation analyses of these two scale items were found to be significant (at $p < 0.05$, for a 2-tailed test). Therefore, there is sufficient evidence to state that employees' that are proud to be part of their organisations will most likely talk up their organisations to their friends as great organisations to work for.

Based on this validation, it can be admitted that employees' affective commitment is largely manifested in employees' that are proud of their organisations and talk up their organisations to their friends as great organisations to work for. However, yet based on the survey results, employees' affective commitment is the least indication

of employees' willingness to accept almost any type of job assignment in order to keep working for their organisations. In summary, there is sufficient proof from the survey conducted in this research to point out that an increase in employees' affective commitment to their organisations would significantly increase employees' loyalty (Hypothesis 3)), and at the same time reduce employees' negative attitudes (Hypothesis 7. In the next section, the provision of social and individualised is examined to further explain how resilience can be built into organisational systems at the individual level.

6.3.1.2 Provision of social and individualised supports

In existing literature, individualised or social support is explained to be the resources that are provided to people within the context of interpersonal relationships (Belle 1989). By any means, the ability of employees' ability to successful cope with organisational changes is the sense of hardiness, beliefs about having control over their work environment, and the availability of social supports within and outside the organisation (Callan 1993). Hence, a couple of studies have explored the contributing importance that the provision of social support to employees plays during organisational changes in various fields (e.g. Barrera et al. 2004; Bovier et al. 2004; Salsman et al. 2005). One of such studies is Griffeth et al. (1999). Griffeth et al.'s (1999) belief that the more top managements in organisations comprehend how employees adapt to work environment, the better their chances of enhancing their employees' productivity and increase retention was further supported in this research. Obtained information regarding how case organisations endeavour to enable feel well-situated for proposed or on-going organisation-wide changes provide their employees one form of social and individualised. Here in this study, individualised or social support include any form of resources provided by organisations that would possibly make employee to believe that he or she is cared for and loved, esteemed and valued, and belongs to a network of communication and mutual obligations.

Findings from this research suggest that provision of social support by organisations is often included in employment packages than individualised support in large

enterprises than small-medium sized organisations. Therefore, social support is often generalised moral or psychological perceived necessities provided to employees towards luring them to remain committed or adjust suitably to changing conditions while individualised support are targeted support given to individuals at immediate points of need. Examples of such social and individualised support discussed by those interviewed in the case organisations include giving advance salaries to employees for personal urgent obligations (Case C), access to grants and loans as staff benefits (Cases A, B, and E), giving unscheduled time-off to employees that are bereaved and making available organisation's resources (e.g. the staff buses) for the burial arrangements (Cases F and H), free enrolment to health fitness programs (Case G), and paying of a diligent employee's child hospital bills (Case I). In view of this, the perceived existence of social support from colleagues and superiors is to be considered as an important construct that promotes resilience at individual level as it aids employees' adjustment and adaptation to organisational change (See similar account in Martin et al. 2005). The effectiveness of either social or individualised support provided by organisations to their employees is relatively not about which of these types of support is made available, it is more of employees clearly understanding why the support is provided and appreciating such gestures (Managing Partner, Case H). Once this can be achieved, the provision of individualised and social support can considerably contribute to reducing employees' resistance to organisation-wide changes (Hypothesis 5) as well as increasing employees' affective commitment to their organisations (Hypothesis 9)

6.3.1.3 Use of stress coping mechanisms

Literary, coping strategies mainly delineates the relaxation techniques and intentional or targeted mechanisms that individuals' adopt in dealing with and coming to terms with unfavourable conditions. It describes individuals' dispositions in which they would self-motivate and validate their newly established circumstances or habits by comparing, justifying and positively associating reasons as to why they should not relapse back to their old but now marked undesirable ways. That is, a state where they finally accept their new status or condition (Hayes and Wheelwright 1979).

Fleishman (1984 as quoted in Holahan and Moos 1987) explained that coping strategies are the *“overt and covert behaviours that are taken to reduce or eliminate psychological distress or stressful condition”*. As such, coping strategies are *“constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”* (Lazarus and Folkman 1984). In other words, generally, coping mechanism is perceived as *“a stabilizing factor that may help individuals maintain psychosocial adaptation during discomforting, uncomfortable and stressful periods”* (Holahan and Moos 1987).

In the literature, the idea of employees' using coping strategies is usually described in relation to theories of stress management and behavioural situational responses (Callan 1993; 1994; Terry and Callan 1997; 2001). This is because organisational changes are seen as a major source of workplace stress, thereby resulting in negative affectivity, behavioural and psychological traits (Hellriegel et al. 2008; Martin et al. 2005; Parkes 1990). In retrospect, a number of interviewees of this research's pilot study acknowledged that the use of some form of stress-coping mechanisms helped their employees' develop *“sense of belonging”* (Int.10), *“confidence”* (Int.18) and *“commitment to the changes being done”* (Int.14). Across the nine organisations, it was further confirmed that employees' adopt one form of stress coping mechanisms or the other in their attempt to get by adverse situations associated with implemented organisation-wide changes. Hence, stress coping mechanisms, in the context of this research, refers to all types of change adjustments interventions that organisations make available to their employees or those that employees' self develop and adopt with the intention of reducing the effects of stress on the individuals who are either directly or indirectly involved in organisational changes. Just as this research findings show that employees' loyalty can be religion-based, religious tenets or principles were found to be a type of stress coping mechanisms used by employees across the nine organisations.

All the three scale items used to assess employees' use of stress coping mechanisms were significantly with employees' use of stress coping mechanisms. The notion that employees' create diversion mechanisms by believing that the

change could also be an opportunity for them to improve had the highest correlation. This was followed by the scale item that suggested that they employees remember strategies with which they had once used to excel when faced with similar obstacles challenges. The least correlated scale item indicated that employees, over time, devise their own ways of dealing with challenges. As such, based on these results, the use of stress coping mechanisms is more potent when employees need to address immediate problems than when they take on such mechanisms towards adapting and adjusting to changes in the longer period of time. Thus, one can proclaim that stress coping mechanisms targeted at resolving immediate concerns and issues should possibly aid in getting employees' to support organisation-wide changes than those directed towards general adaptation and adjustment to organisation-wide changes.

This assertion is similar to that of two studies; which are Terry and Callan (1997) and Callan (1993). It is observed in both studies that though there are some discrepancies as to what the coping strategies are generally, there is general agreement that coping strategies can be classified as either problem or emotion focused. The authors of these two studies in addition explained that problem-focussed coping strategies are directed at the source of difficulties towards managing stressful working situations and environments while emotion-focussed strategies rely on avoidant strategies and are typically adopted in an effort to deal with the associated level of emotional distress. It is further reported in these two studies that employees' that use problem-focussed coping strategies adjust better to both organisational changes and general work stress. To bring this section to a close, finding from this research has further affirmed that employees' use of stress coping mechanisms by employees remains a critical construct that enhances employees' adaptation and prolonged adjustment to organisation-wide changes.

Summary of research finding:

In this section, Hypothesis 4 is discussed in respect to each of the nine case organisations. It has been detailed that employees' readiness to support organisation-wide change is the opposite of employees' resistance to organisation-

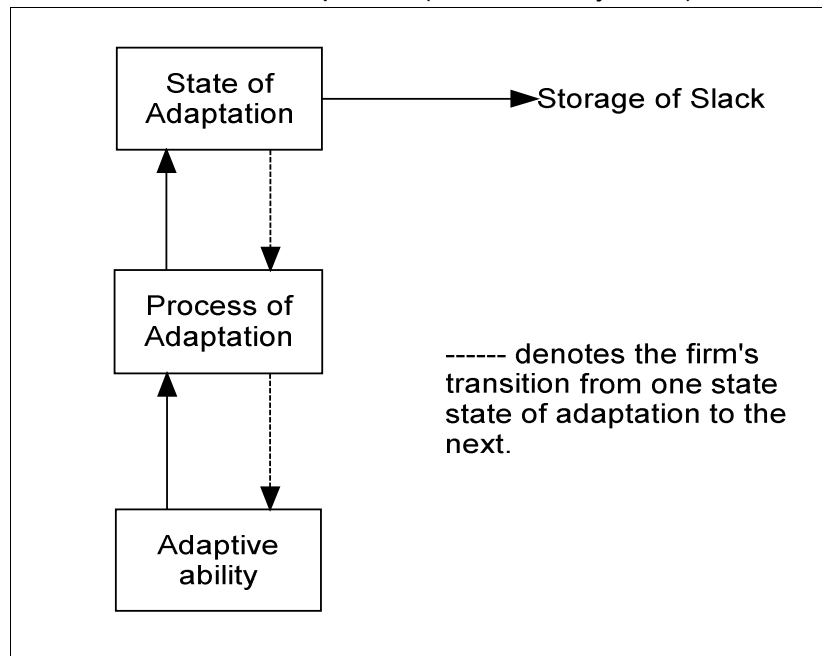
wide. Based on the evidence obtained in this study, an attempt has been made to show that employees' readiness to support organisation-wide changes can be achieved by (a) reducing significantly employees' non-positive behaviours, (b) creating effective communication in organisations, (c) increasing employees' loyalty and (d) increasing employees' affective commitment to their organisation. During the survey analysis, at the first instance when the structural equation modelling for employees' readiness to support organisation-wide changes was performed, the Chi-square statistics and goodness of fit index were barely within the recommended. However, when the use of stress coping mechanisms and the provision of social and individualised support was used as mediating factors, the values fell within limit. This suggests that the use of stress coping strategies and the provision of social and individualised support to employees can significantly help to reduce employees' non-positive behaviours and at the same improve employees' readiness to support organisation-wide changes (Hypothesis 12).

6.3.2 Resilience-building at the organisational level

6.3.2.1 Organisational Adaptive Capacity (OAC)

The process of building adaptive capacities in organisations is essentially an attempt to formally develop a repertoire of responses capable of enhancing organisations' ability to resolve unforeseen problems (McCann and Lee 2009; Staber and Sydow 2002). As shown in Figure 64, the process involves incorporating slack into organisational systems (Chakravarthy 1982; Staber and Sydow 2002). At the final stage, after which organisations have successfully established adequate capability or stored up sufficient slack, which is the state of adaptation in the figure below, their level of adaptation is highest and thereafter such organisations are assumed to be able to handle any unforeseen complications within their organisations and immediate environments (Chakravarthy 1982). However, the process of building adaptive capacity in organisation might often times be seen as a less favoured approach to surviving in an industry characterised with extreme turmoil because such process is hard to maintain, the slacks might be considered as wastes as rewards for storing up slacks are often not readily visible (Staber and Sydow 2002).

Figure 64: A Skeletal Model of Adaptation (Chakravarthy 1982)



Nonetheless, the potential advantages of developing adaptive capacities is important considering the opportunity cost of not developing adaptive capacities into their systems or processes. See Gittel et al. (2006), Sheffi (2005b) and Stephenson et al. (2010) for detailed examples of the disadvantages for not developing adaptive capabilities even at times when it is least needed. As such, organisational adaptive capacity in terms of endlessly creating opportunities through which employees can develop, has received some theoretical considerations and is widely investigated from Strategic (Human) Management viewpoints (Chakravarthy 1982; Finkelstein et al. 2008; Jiang 2009; Thompson and Martin 2005). To explain this in detail, the three research constructs (namely learning culture, leadership style and quality, and availability of resources) developed from the pilot study used to assess organisations' adaptive capacity during on-going organisation-wide changes are presented. As regards learning culture, results from a cross correlation of the seven scale items reveal that all the seven items correlate significantly with one another. This means that an increase in any of the scale items used to assess has the potential of increasing any of the other six scale items.

Also, from the survey results, the scale item used to investigate whether employees in case organisations are coached on how to do right things correlated the highest. This implies that training of employees is crucial to building learning cultures in organisations. The accounts from senior management staff interviewed in Case D, presented earlier in this thesis under how organisations build-in resilience into changing systems, can be used to validate this also. On the whole, organisations' effort to cultivate a learning culture can sufficiently minimise employees' non-positive behaviours based on perceived change benefits (Hypothesis 6). This is because in this study it has been established that employees that have access to opportunities that will assist them to develop skills needed to best do their work (which was the second scale item on the learning culture scale) are less afraid of the unknown (i.e. PCB2). Although attributable reasons for this could not be identified in this research, it might primarily be because such access and opportunity might offer them added skills they could apply to take advantage of a wide range of future rewarding prospects either within or outside their organisations. That is to say, such relationship emphasises on the need to use learning as leverage *“as it has been widely articulated that knowledge creation and continuous learning at the individual, team, and organisational levels may be the only source of sustainable competitive advantage”* (Sharma et al. 2005). In view of this, one thing is thus crucial; organisational leaders must be committed to building or cultivating learning culture as the interviewees also attested to this. This is however largely dependent on organisational leadership styles and quality. Two scales were used to assess leadership style and quality; which was the second research construct used to assess the adaptive capacity of the case organisations.

The first scale was designed to measure employees' belief in their leaders. This is based on the supposition that employees' everyday behaviour is more influenced by their interpretation of their leaders' proximate factors than distant factors (Black and Gregersen 2002; Furst and Cable 2008; Hemmelgarn et al. 2006; Podsakoff et al. 1990). In this study, proximate factors are often a product of direct manager-employee interaction and relationships while distant factors are come by through selective interpretation of their organisations' senior management staff's behaviours.

However, evidence from the results of the survey carried out showed that only one out of the four scale items included as proximate factors in the scale used to assess employees' belief in their leaders correlate more than the only scale item used to assess distant factor. This thus opposes normal expectations that proximate factors influence employees' better than distant factors. This predicates that although employees' belief in their organisational leaders is more influenced by such employees' judgement that their direct managers are trustworthy persons than employees' been convinced that senior management staff in their organisations can fulfil promises, employees' belief in their leaders is less determined by such employees' impression that direct managers can deliver on commitments, makes substantial contribution towards helping them to achieve their goals and their ability to resolve their direct employees' dissatisfaction quickly than their belief that senior management staff in their organisations can fulfil promises.

The second scale that made up the scale used to employees' belief in their leaders is designed to measure the level of delegation of roles in case organisations. This inclusion is supported by the view that employees' perception of work environments and climate will significantly influence how such employees will react to organisation-wide changes (Martin et al. 2005; Michela and Burke 2000; Patterson et al. 2005). Likewise, it has been found that the more employees' roles are formalised and delegated, the more employees will swiftly resolve problems among co-workers and regularly encourages discussion (Kovac and Jesenko 2010). Delegation of responsibilities can either be formalised or non-formalised (Kovac and Jesenko 2010). Simply put, employees can either be officially designated to carry out tasks or informal delegation of responsibilities. The latter suggests that there comes a point when employees have to carry out extra-role activities in order to be able to perform their officially designated tasks. Employees that can perform their colleagues' roles once they need to is an added bonus that is desired by organisations (Project Engineer I, Case B; Audit and Assurance Manager, Case E).

As such, employees would develop some sense of confidence to do their jobs once they perceive the work is not too much of a burden and their work environment is nonthreatening and safe (Hemmelgarn et al. 2006; Schneider et al. 1996). From the

survey results, it was organisational leaders' ensure that their subordinates share the same sense of purpose and their ability to encourage teamwork among their subordinates would the most indicate that employees' delegated roles are within organisations. Further correlation analyses revealed that assess employees' non-positive behaviours based on perceived change benefits can the sufficiently reduced by: (a) increasing employees' belief in leadership and (b) clearly defining and delegation of role and responsibilities (Hypothesis 8). In addition, in this study, the degree to which the resources that employees need to work effectively and adapt to organisation-wide changes is appreciably associated with lessening employees' non-positive behaviours. Therefore, not only should needed resources be provided, along granting employees access to the resources the resources should be fairly allocated.

6.3.2.2 Organisational Resilience (OR)

Resilience-building is really not a popular term, used in Nigerian organisations especially those considered, even though each of these observed organisations had similar processes. Just as it was when pilot study participants were asked about Lean implementation, most of the interviewees from the nine case organisations that were asked how they attempt to build-in resilience into their systems right away requested for further explanation. After the term was explained, each of the interviewee then went ahead to state and explain in-depth how they hope to response and ensure they continue to remain operational or functional for a long period of time even after disruptions that can threaten their inexistence. In summary, all the nine organisations were mindful of the need to build in resilience into their systems especially after undergoing organisation-wide changes, though the level and extent of their awareness varies. Almost all the interviewees' in the pilot and main study indicated that their organisation had either a formal or informal way through which their employees are "*empowered*" (Int.1) "*so as to still be able to... perform effectively...*" (Int.1) when the company is faced with disruptions or when other "*... displeasing consequences arise*" (Int.15).

Therefore, organisations recognise the need to build in resilience into their systems so as to remain competitive and operational irrespective of the conditions they find

themselves in. Although, it is generally said that less developed countries, like Nigeria, are usually adopters of new technology or processes (Besley and Case 1993; Davison et al. 2000; Molla and Licker 2005; Perez and Soete 1988), this is not entirely true as observed across all the nine cases. Evidence from this research study show that organisations in Nigeria e.g. case organisations might not necessary be regarded as inventors of new technologies not because they do not develop innovative approaches through which they can effectively run their organisations but mostly due to the fact their innovative ways do not become as popular and replicated in several organisations as it is with Lean implementation or resilience-building or other business improvement techniques. Reasons for this might be because the Nigerian market is highly competitive and relatively smaller than developed nations' market and so organisations publicising their competitive edge would amount to other organisations replicating their strategies and them losing their market position.

Two research constructs, namely impact assessment and scenario planning, were used to assess organisational resilience. Cross case analysis of the nine organisations indicate that large organisations the chances of organisations formalising their impact assessment and scenario planning increases as the size of the organisation increases. Also, in small organisations, the process of building in resilience is portrayed to be essentially the roles of the top directors who happen to be the owners of the organisation while in large organisations the plan is made available to as much employees as possible. Thus, as organisations got larger, the level and extent to which organisations strive to build in resilience into their systems would filter down the more than it would in small organisations.

An example of this is the traditional fire drills, the smaller the organisation the less likely they will train their employees' fire prevention techniques. Even when such practice is existing, the number of employees that are knowledgeable of the process are small e.g. the use of fire extinguishers. Based on this, one might also insinuate that the chances of organisations' having impact assessment and scenario planning strategies are more evident in organisations engaged in very high cost operations (e.g. Case A and B); whereby catastrophic events would result in huge loss. Hence, decline in storage up organisational adaptive capabilities or capacities would

negatively affect organisations' ability to build-in resilience at the organisational level (Hypothesis 11). In summary, for organisations to build-in resilience into their systems during and after undergoing organisation-wide changes, it must be carried out simultaneously at both the individual level (which is essentially getting employees to support the organisation-wide changes) and organisational levels (Hypothesis 10).

6.4 Determining whether the research objectives have been met

At the start of this research, the research objective was to contribute to the body of knowledge by

- x. Identifying and describing enterprise-level factors that enhance organisations' resilience building capabilities particularly after organisation-wide changes; and
- xi. Specifying actions that managers can follow over the life of an organisation-wide change project that will improve the resilience of systems undergoing change.

Based on the discussion presented in this chapter, the first objective has been met. Five enterprise level factors that can enhance organisations' resilience building capabilities particularly after organisation-wide changes have been identified. These five enterprise-level factors are:

- i. Employees' readiness to support such organisation-wide change;
- ii. The provision of social and individualised support by organisations;
- iii. The use of stress coping mechanisms by employees;
- iv. The development of organisational adaptive capabilities or capacities; and
- v. The existence of organisation resilience strategies.

As regards the actions specifying actions that managers can follow over the life of an organisation-wide change project that will improve the resilience of systems undergoing change, based on all this chapter's discussion and research findings, this research's proposed actions specifically call for condensing organisations' approach in three key actions: which are:

- i. Getting employees' to fully participate in, and support, organisation-wide changes

- ii. Provision of targeted human development organisational adaptive capacities,
- iii. Simultaneously and continuously performing situational appraisals (i.e. impact assessment and scenario planning) until the end of the lifecycle of the implemented change; that is, when a new organisation-wide change is implemented.

As such, the second research objective has also been met. A breakdown of each of these three actions below is thus presented.

Get employees to fully participate in, and support, the changes

Organisations can get their employees to fully participate and support ongoing organisation-wide changes by following these steps:

A. Plan for employees' resistance

- A1. Clearly define the objectives of the change and its intended achievements. Set out specific, visible, achievable and measurable milestones.
- A2. Involve all major stakeholders in discussions relating to the proposed change. Gather first-hand data from employees that will be most affected.
- A3. Clearly outline the benefits of the proposed change to all stakeholders and strive to establish legitimacy for the change. The change benefits must however be translated and related as personal gains to employees. That is to say, the needs for undergoing the change must be explained in clear terms that will cause employees to see as relevant and beneficial.
- A4. Deploy both formal and informal methods through which employees can be motivated.
- A5. Incorporate a time allowance which employees can use in framing their own need of the change and its impact on their present status. During this period of time, employees go through a process of deciding and internalising what the change is all about, how their current status would be altered, the extent of alterations that they need to undergo, the actions necessary to bring about the desired alterations and how they intend to

adapt and maintain a positive outlook when they finally achieve the desired behavioural changes in view of the organisational changes.

A6. Once employees decide to participate and support proposed or ongoing organisation-wide changes, both individualised and social support must be given to this set of individuals. In addition, organisations should help employees frame appropriate coping strategies they can adopt through the life of the change project.

B. Based on feedback from wide consultations, align employees' goal with the organisation's goals, change success and long-term performance. This will make employees realise they are more likely to meet their goals and aspirations when the organisations' succeeds and are able to sustain derived benefits and/ or performance for a lengthy period of time.

C. Ensure that the change, and its progress, is well communicated.

C1. Design an open communication style that encourages continuous participation from all major stakeholders (see examples on how to do this in Sheffi 2005b); most importantly for employees that will be more likely affected. Discussions must be on-going and held in parallel at strategic, tactical and operational levels. Be ready to accept constructive criticisms

C2. Create a support team or change service centre that will ensure and provide assistance for employees. This will afford concerned employees and major stakeholders the opportunity to express their reservations and dissatisfactions. In this case, employees' resistance should be seen as an opportunity to address potential problems.

C3. Establish different communication channels and plans through which employees will be periodically updated regarding the change.

D. Announce accomplishing of milestones and reward employees' achievements

D1. Acknowledge all teams' effort

D2. Review the teams' effort and identify areas of failure and success.

- D3. Establish valuable lessons for the remaining implementation phases of the change
- D4. Discuss lessons learnt with employees' and demand for the cooperation to effect recommendations
- D5. Set up a lessons learnt register and document all learns learnt for future reference.

E. Repeat steps A through D for the next implementation phase of the change.

Build adequate organisational adaptive capabilities

It is proposed that organisations can build in adequate organisational adaptive capabilities through the following steps:

- A. Get top managements to be seen as being the main driver of the change. A senior management staff should be appointed Head of the Monitoring team.
- B. Carry out an elaborate needs assessment.
 - B1. Critically appraise the organisations' capability to successfully implement the proposed organisation-wide change. This entails (a) describing the current problem or need for the organisation to implement the change, a bulk of which are inputs from A1, (b) establishing the desired state or benefits of the change, and (c) determining the systems' requirement and capabilities in order to be able to assess the gaps.
 - B2. Identify appropriate and next-suitable alternate approaches through which assessed gaps can be met. In other words, organisations need to identify knowledge and skill required for performing the tasks of resolving assessed gaps.
 - B3. Mobilise resources towards resolving assessed gaps. Examples of activities of resource mobilisation include the formation of specialised implementation teams, allocation of resources, and engagement of consultant.

- B4. Delegate roles and responsibilities with each division headed by a Subject Matter Expert. Ensure that all employees, most especially the change steering committee have access to needed resources.

C. Create a self-sustaining learning culture

- C1. Understand employees' by developing a learning profile for each employee. Have one-and-one discussion to establish future career paths. Group employees based on similarities of their learning needs.
- C2. Design appropriate employee development plans for various future career aspirations. For each employee level, identify the basic, intermediate and advanced skills needed. For example, an employee might need to proficient in basic skills to get promoted to level, and to become a Subject Matter Expert the employees must have met all the advanced requirements.
- C3. Mark out appropriate transitory plans and programs that can help bridge the competency gaps between employees' learning needs and their desired status and expertise. Identify how to meet these learning needs through training opportunities or use of consultants..
- C4. For within company development, initiate a mentoring program which allows new employees to be coached on how personal and career developments by more senior and experienced employees.
- C5. Rejuvenate employees' interests in the organisation by promoting team building and creating opportunities for sharing knowledge. Strive to create a sense of shared purpose among employees. Put more emphasis on learning-by-doing activities (for further read on this, see Helfat and Peteraf 2003).

- D. Continuously seek out newer organisational learning approaches that will further help organisations' sustain their assumed learning culture. Engage in activities that help to refresh organisational memory (for further read on this, consult Helfat and Peteraf 2003; Myers 1985). Finally, encourage employees to take breaks.

Simultaneously and continuously perform situational appraisals

Organisations can follow the following steps when performing situational appraisals:

- A. Carry out impact assessments before implementation the change:
 - A1. Build in an appropriate level of dependency in between the systems. Try as much as possible to minimise the number of interconnected systems that will be affected by disruptive events.
 - A2. Reduce over-reliance of employees on one another, but still design job functions to overlap. Design job responsibilities to overlap. This is crucial in that effective learning only takes place among employees within an organisational unit that has shared or overlapping job responsibilities. It is taken that this sort of arrangement promotes collaborative effort and/ or teamwork.
 - A3. Establish all systems' tolerance and control limits.

- B. Construct alternatives based on results of impact assessments performed.
Devise alternate plans

- C. Train your employees
 - C1. Inform employees of alternate plans. Take time to explain why the alternate plans were developed.
 - C2. Identify the variance in knowledge and skill needed to carry out existing (or alternate plans). Group the variance into four broad classifications, namely (a) urgent and important, (b) urgent but not important, (c) important but not urgent and (d) not important and not urgent..
 - C3. Prioritise, with urgent and important being the first while not urgent and not implement comes last.
 - C4. Devise methods to assess the extent to which the training has been been successful.

D. Conduct regular drills and update accordingly.

The significance of drills bring to the fore the need to adequately plan for disruptive events. Taking into consideration that disruptive events happen without prior warning and so employees are time-constrained to find immediate solutions to control the impact of such events, as such more likely than not, they will act in deference to expertise, teamwork and residual knowledge. All these three elements (i.e. expertise, teamwork and residual knowledge) are formed well before their needs are called into play; that is, they are developed at various periods in which individuals are exposed to similar occurrences, learn from their experience, practice over and over again what they have learnt after which they become proficient.

E. Design scenario planning activities in such a way that such activities are targeted at reducing the vulnerability of systems on a day-to-day basis. This will help to reduce the level of uncertainty that exists in organisations. Organisations can avoid uncertainty through two major ways, namely by (a) substituting long-term anticipated decisions for short-term runs, placing emphasis on short-term strategies or reactions and immediate problem solving proficiencies; and (b) developing plans, standard operating procedures that do not depend on predictions of uncertain future events, but rather on plans that are measurable and controllable. .

F. Implement appropriate alternate plans as needed promptly. According to Weick (1993), promptly substituting or replacing a collapsed traditional order in organisations with an improvised order would forestall further paralysis of normal operations

6.5 Providing answers to the research questions.

In this section, answers are provided to the two research questions, which are:

- (i) In Nigeria, out of the enterprise factors identified, which enhance organisations' ability of becoming resilient and possibly achieving and

maintaining long-term performance particularly after undergoing organisation-wide changes at both the individual and organisation levels?

- (ii) Does any of the enterprise-level factors, identified in question (i), differ across organisations' ownership, size of organisations, types of organisation or types of industries i.e. across publicly or privately-owned organisations, technologically-driven organisations or service-oriented organisations and oil and gas or non oil and Gas industries?

Answering the first question

Founded on the five enterprise-level factors established in this study:

- i. The provision of targeted human development organisational adaptive capacity (OAC) and the existence of systems' recovery strategies (OR) will enhance organisations' ability of becoming resilient, while
- ii. Employees' readiness to support organisation-wide changes, the provision of both individualised and social support to employees during and after the change is implemented and the use of stress coping mechanisms by employees will enhance organisations' ability of achieving and maintaining long-term performance particularly after organisation-wide changes.

Answering the second question

At the start of this research the researcher's intention was to determine whether any of the enterprise-level factors, identified during the course of this study, differ across various criteria such type of organisations' core functions, size of organisations, organisation-types. In order to answer this correctly, non-parametric cross-case analyses were performed primarily because such analyses enable researchers to generalise their research studies (Eisenhardt 1989a; Miles and Huberman 1994) while also creating opportunities to which in-depth implications and explanations of their research findings can be provided (Voss et al. 2002). In addition, this type of analyses helps to further strengthen the validity and robustness of research findings since researchers are able to compare their results in groups of independent

organisations (Rowley 2002). The results of the Mann-Whitney U-tests performed was primarily based on the aim to establish whether there should be a different approach to how organisations, especially those operating in Nigeria, should attempt to build in some degree of resilience into their changes systems after undergoing organisation-wide changes. Below are the research findings:

Employees' readiness to support organisation-wide changes:

- i. There is sufficient evidence, from the research data analysed, to say that the manner through which technologically-driven and service-oriented organisations should attempt to get their employee to support organisation-wide changes should be different. From the Mann-Witney U-tests results, it shows that particular attention should be given to employees' non-allegiance to their organisations, employees' continued belief in their organisation and employees' affective commitment to their organisations in cases where the same implementation strategy is being used. In addition, delegation of roles, how employees conceptualise benefits of resources allocated to them and fair allocation of resources would vary also.
- ii. Similarly for oil and non-oil organisations, the Mann-Witney U-tests results show that particular attention should be given to employees' non-allegiance to their organisations, employees' continued belief in their organisation and employees' affective commitment to their organisations would vary even in cases where the same implementation strategy is being used. However, delegation of roles would not vary but how employees perceive the benefits of the resources made available to them and whether employees think resources in their organisations are fairly allocated. Lastly, the manner in which social and individualised support is provided in oil organisations would be different from non-oil organisations. This was actually found to be true as regards salary and compensations. For example, in one of the oil organisations observed the starting salary package of a Graduate Engineer is more than the total package of the Workshop supervisor in Case D.
- iii. For the last group, that is the large and the small-medium enterprises, employees' non-allegiance to their organisations, employees' continued belief in their organisation, access to resources, how employees perceive the benefits of

the resources made available to them and scenario planning mechanism would differ.

In summary, across the three categories considered, employees' non-allegiance to their organisations and employees' continued belief in their organisation were found to be prominent in all the three cases. Therefore, to answer the second question, the above numbered points (i.e. i to iii) suggest and indicate enterprise level factors that would differ across the categories considered.

6.6 Chapter Summary

In this chapter, two things were achieved. The first was that the research second research objective was met. Three specific actions that managers can follow over the life of an organisation-wide change project which will improve the resilience of systems undergoing change have been presented. Thereafter, the second achievement was that the, operational measures used to appraise five research themes were analysed against three different grouping variables and the extent to which each of these varying measures differ were determined. For this research based on the fact that the first part of the research was exploratory, out of the research process and methodologies considered, the adopted research process and methodology is satisfactory. The research objectives have been satisfactory achieved and the research questions have also been answered. Thus, the next and final chapter draws a conclusion to the research. In the chapter, a summary of the thesis is presented. At the end of the chapter 8, further recommendations in relation to this are provided.

CHAPTER 7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

At the start of this thesis, two research questions bothering on how organisations can sufficiently build-in resilience into changing and changed systems especially after undergoing organisation-wide changes. Based on these research questions and stated research objectives in Chapter 1, a comprehensive literature review was carried out. The review helped the researcher to develop foundational framework for the research. In Chapter 3, the research methodology and design was developed. The adopted research strategy for this study was to first conduct an exploratory study that highlighted the research's central themes, followed by a descriptive research process and both an explanatory and correlational research. In Chapters 4 and 5, the results of the exploratory and descriptive research process were presented respectively. Chapter 6 covers the discussion of this research findings and Chapter 7 highlights the research conclusions; which covers the summary of findings, contributions to the Nigerian studies, change management practitioners and organisational resilience studies. The research limitations are also included, and recommendations are presented.

7.2 Summary of research findings

7.2.1 Survey study findings

Below are a summary of top-level findings from the survey study conducted:

- i. Organisations ability to build in resilience into changing or changed systems are dependent on: (a) resilience building at the organisational level; and (b) resilience building at the individual level. Resilience building at the individual (or personal) level are shaped by employees' readiness to support organisation-wide changes, the provision of individualised and social support to employees and employees' use of stress coping mechanisms. On the other hand, the existence of systems' recovery strategies and the provision of targeted human development organisational adaptive capabilities were found

- to significantly affect organisations' attempt to build resilience into changing or changed systems at the organisational level.
- ii. Employees' readiness to support organisation-wide changes (ERSC) was found to be influenced by four factors, namely: employees' attitude based on perceived change benefits, the extent to which the organisation-wide change has been communicated, employees' loyalty and employees' affective commitment to their organisations. Further analysis of these four factors revealed that (a) employees' attitude to change based on perceived change benefits is an indication of employees' experience of past change attempts, which relates the relational capability of employees to either feel obliged, trusting and less reluctant to support organisation-wide changes; (b) organisations make effort towards ensuring that their communication system is effective by continuously working out ways to improve their employees' level of awareness and by creating opportunities through which their employees can freely express themselves; and (c) employees loyalty is representative of employees' sincerity, continued belief in their organisations and express display of allegiance to their organisations.
 - iii. The development of targeted human development organisational adaptive capabilities typifies: (i) the presence of learning culture in organisations; (ii) leadership style and quality; and (iii) the continuous development of employees or enablement of employees' to have access to needed resources.

7.2.2 Within-cases and across cases analysis

The findings are as follows:

- i. Although the degree to which the process of building in resilience into changing systems or changed systems vary as organisations' size increases, organisations ranging from SMEs to large enterprises were found to have in existence procedures that would help them build in resilience into changing and changed systems. However, it is more pronounced in larger organisations than smaller organisations.
- ii. For organisations attempting to implement organisation-wide changes, it has been discovered that it far important for such organisations to ensure that their

final systems are capable of sustaining their desired changes. Preferably, should the results of a systems' capability test reveal that their future systems' capability state is insufficient to sustain their desired change, organisations should endeavour to firstly seek out ways through the systems can be buffered or upgraded. Organisations are therefore advised not to start implementing any organisation-wide change until their management are satisfied that the future systems' capability state is well able to sustain their to-be implemented organisation-wide changes.

7.3 Contributions of the research: A summary of the research achievements

This research has established that employees' readiness to fully participate or support organisation-wide changes in a key factor to building resilience into systems after implementing organisation-wide changes. The provision of social and individual strategies and use of stress coping mechanisms as mediating factors has been shown to have validated capacity to aid in reducing employees' negative behaviours. A summary of how this research has contributed to the body of existing knowledge on organisational resilience, as well as the implementation of organisation-wide changes, are listed in the next sub-sections.

7.3.1 Contributions to Nigerian-based studies and Nigerian organisations

Considering that there is a dearth of information regarding key issues as to how organisations operating in Nigeria can build resilience into their systems, this research has put forward a detailed account of such endeavours. The typical organisation-wide changes being implemented in organisations operating across Nigerian industries were identified. These changes were broadly grouped into five namely: (a) changes to management and organisational structure, (b) lean thinking and implementation, (c) implementation of enterprise resource planning systems, (d) customer relationship management, and (e) total quality management. With a total of sixteen cases discussed, the most talked over organisation-wide change type was lean thinking and implementation. Although this is quite popular, the results of the pilot study results have shown that the concept is widely misunderstood.

Lean thinking and implementation was generally thought to be a one-off cost saving approach rather than a continuous improvement process. The least discussed organisation-wide change was in relation to changes in management and organisational structure. The two cases where this was discussed, involved participants who worked in top management positions in state-owned organisations; none of the participants work for privately owned organisations. Although, based on the accounts of the interviewees, thirty nine changes were initially thought to be successful, three actually failed to meet their intended expectations at later stages of the implementation. Hence, this indicates that organisation-wide change is only successful when it meets its intended expectations as at the time the project is brought to closure.

In total, twenty one organisation-wide changes discussed were attributed to have failed. This represents approximately forty two percent of all the cases considered. Sixteen of the twenty one organisation-wide changes failed because respondents believed they were highly complex business changes, while only the remaining five were said not to be complex. Still on the failed organisation-wide changes, ten were implemented under conditions described to consist of high level of uncertainty. As follow-up to this, the reasons why organisations implement organisation-wide changes are primarily because: (a) they had no choice but to carry out the change; (b) it worked for a similar company, so they decided to implement same; (c) they realised its potential, thought it would bring them desired results and therefore went on to implement it; (d) other reasons, which include upgrades, rectifications and replacements.

These types of changes' success rate have also been satisfactorily linked with the common reasons that the pilot study respondents stated for undergoing their discussed change attempts. Seventy one percent of the change types that interviewees made mention of, which they had no choice in, failed. Those change types that were implemented after organisations realised its benefits and diligently planned to implement had the least failure rate. This indicates that organisations are more under pressure to implement planned organisation-wide changes that require

urgent implementation than those change types which they have sufficient time to plan ahead for. From this, it is advisable for Nigerian organisations to properly plan for organisation-wide changes by carrying out detailed research regarding their intended organisation-wide changes, and having a well-defined business case for the proposed organisation-wide change. In addition to these research findings and contributions, this thesis has further contributed through the following ways:

- i. A substantial number of resilience-based studies have been conducted and related from a perspective of more developed nations than Nigeria. Hence, this research is an addition to the existing empirical-based knowledge of how organisations can develop resilience focussed capabilities in a developing nation as Nigeria.
- ii. The thesis offers enterprise-level factors that address the challenge of achieving long-term performance of organisations operating in Nigerian industries, by developing an integrated resilience building approach for organisations, particularly after undergoing disruptive organisation-wide changes.
- iii. The answers to the second research question highlight and present clear cut considerations for further study of how each of the operational measures used in this study varies using different criteria. The research findings can be adopted as guidelines towards the development of these identified critical enterprise level factors.
- iv. Furthermore, the researcher has presented an opportunity to build such theoretical understanding of how employees' readiness to take part and support an ongoing organisation-wide change can enhance such organisations' chances of becoming resilient.

The implications of this research on organisations operating in the Nigerian industries are summarised as follows:

- i. The concept of continuous improvement process is wrongly misconstrued in Nigeria.
- ii. The chances of organisations failing in their attempt to implement organisation-wide changes when they are forced due to a number of reasons (such as disruptive changes within the organisations or in their immediate business

- environments) is higher than when organisations' by their own realise to implement similar changes.
- iii. The failure rate of organisation-wide changes is still comparably high. Continuous organisation-wide changes are more likely to fail than one-off organisation-wide changes. Worse off is the fact that a high number of failed organisation-wide can have significant or disruptive effects on organisations
 - iv. Furthermore, in Nigeria, multinational organisations are less liable to fail in their change attempts than both national and local organisations.
 - v. Highly complex organisations-wide changes are difficult to implement in business conditions ascribed to have higher uncertainty than less complex organisation-wide changes implemented in less uncertain business conditions.
 - vi. Nigerian government-controlled organisations are more prone to have fundamental changes to their management and organisations. This eventually leads to discontinuity of policies, which in return is detrimental to the success of the organisation-wide changes.
 - vii. Failure profiles of each group of the discussed organisation-wide changes indicate that employees' perception of organisation-wide changes is often negative.

7.3.2 Contributions to Change Management Practice

This research has contributed to the Change Management practice as follows:

- i. The study identifies that management of employees' resistance and the need to cultivate a learning culture in organisations remain vital factors for achieving successful implementation of organisation-wide changes. These two factors also contribute to organisations' ability to sustain derived benefits of such changes.
- ii. In this thesis, avenues through which Change Management consultants can explore so as to alleviate employees' resentment past based on past experience have been provided.
- iii. The importance of employees' willingness to participate in organisation-wide change has been highlighted and related to organisations' ability to maintain

long-term performance after such changes. The mediating roles provision of social and individualised support and the use of stress coping strategies have also been explained.

- iv. The research offers Change Management consultants a reactive approach through which organisations can recover from planned organisation-wide changes that in the end turned disruptive.

7.3.3 Contributions to Organisational Resilience Studies

By answering the research questions presented in the earlier part of this study, this study contributes to theories of organisational resilience studies in the following ways as follows:

- i. This research has provided further credence to the proposition conjecture that accumulative resilience of organisational members further enhances organisations' chances of becoming resilient.
- ii. This study has presented sufficient evidence to prove that employees' readiness to support organisation-wide and the existence of targeted human development organisational adaptive capabilities is important for organisations' desiring to attain some level of resilience especially after undergoing organisation-wide changes.

7.4 Research Limitations

Some limitations were encountered during the course of the study, due to the adopted case study methodology, which, although the most appropriate methodology, does not always allow for generalisation of findings. These limitations are discussed as follows. Firstly, the number of pilot study participants and case organisations were limited. Thus, the findings may not have wider applications to organisations not analysed in this study. Secondly, the research findings could not be validated by the case organisations. Hence, validity and acceptability of the results by the case organisations could not be ascertained. Thirdly, the researcher recognises that adopted assumptions in this research may actually not be valid in the

broader context of real-life situations. Subsequent use of the scales included in this study will serve as opportunities for auditing and providing additional validity. Fourthly, the fact that all the data collected were from Nigerian organisations might mean that the results cannot be generalised and applicable in well developed Western countries; therefore, similar research conducted in these countries would further provide credence to this study. Finally, considering that this study only focused on identifying enterprise-level factors, the enterprise level factors identified in this study may not entirely be sufficient for organisations to build resilience into their systems after undergoing organisation-wide changes. Undoubtedly, other factors at the national-level would also influence an organisation's attempt.

7.5 Recommendations for future study

The research process has been insightful to the researcher. Two main lessons, learnt over the course of the research, that will be most useful for continuation of this study are that: (a) the process of establishing research assumptions, scales and methodology should evolve as the research progresses and to a great extent be hinged on founded theories (DeVellis 1991) and (b) researchers should consider using already validated and existing scales rather than developing entirely new scales, as was done in this study. A summary of other recommendations for future study are as follow:

- i. The research sets out to provide answers to two research questions, which were duly answered. The research findings have also shown that a number of the research constructs developed and examined in this study might vary across different industries. But because of time limit, the researcher could not carry out further research that could reveal the reasons why these research constructs differ. Hence, further research that presents an understanding of the variances is required.
- ii. Further research towards validating the actions described in this study would reflect more general sustainability issues, which will prove valuable in the refinement of the proposed actions that managers can follow over the life of an

organisation-wide change project, which will improve the resilience of systems undergoing change.

- iii. Follow-up research on how these enterprise-level factors can be developed into practical operational strategies that can facilitate organisations' ability to maintain long-term performance especially after undergoing organisation-wide changes is also required. It is hoped that at the end of the investigation, training strategies that will enable employees to maximise the resilience of a changed system can be put forward.
- iv. Finally, as stated in early part of chapter, the investigation was limited in a number of ways. The good thing, however, is that these limitations provide an opportunity for future research (Peng 2008).

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APPENDIX I PILOT STUDY INTERVIEW GUIDE

Organisation Survey ID: _____

Respondent Survey ID: _____

Q1: What is your current role in this organisation? _____

Q2: How long have you been working in this position? _____

Q3: How long have you worked in this organisation? _____

Q4: Has your organisation implemented, is presently implementing or about to implement any of these organisational changes listed in the table below? (Where 1 = Has implemented this type of organisational change, 2 = Presently implementing this type of organisational change, 3 = Planning to implement this type of organisational change, 4 = Have never implemented such and not planning to do so soon).

	1	2	3	4
Lean Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Six Sigma (6σ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Just-in-Time (JIT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Quality Management (TQM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise Resource Planning Systems (ERP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quick Response Manufacturing (QRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Chain Management (SCM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Relationship Manufacturing (CRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Single Minute Exchange of Die (SMED)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rapid Manufacturing (RM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to management and structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q5: How long did the implementation last or is supposed to last? (Where 1 = less than a year; 2 = 1 to 3 years, 3 = 4 to 5 years and 4 = more than 5 years).

	1	2	3	4
Lean Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Six Sigma (6σ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Just-in-Time (JIT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Quality Management (TQM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise Resource Planning Systems (ERP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quick Response Manufacturing (QRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Chain Management (SCM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Relationship Manufacturing (CRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Single Minute Exchange of Die (SMED)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rapid Manufacturing (RM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to management and structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q6: Please indicate your level of involvement in each of the organisation changes that your organisation has implemented, is presently implementing or is about to implement (Where 1 = directly involved; 2 = indirectly involved, 3 = not involved).

	1	2	3
Lean Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Six Sigma (6σ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Just-in-Time (JIT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Quality Management (TQM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise Resource Planning Systems (ERP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quick Response Manufacturing (QRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Chain Management (SCM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Relationship Manufacturing (CRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Single Minute Exchange of Die (SMED)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rapid Manufacturing (RM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to management and structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q7: Please rate the complexity of each of the organisation changes that your organisation has implemented, is presently implementing or is about to implement (Where 1 = has low complexity; 2 = has high complexity).

	1	2
Lean Systems	<input type="checkbox"/>	<input type="checkbox"/>
Six Sigma (6 σ)	<input type="checkbox"/>	<input type="checkbox"/>
Just-in-Time (JIT)	<input type="checkbox"/>	<input type="checkbox"/>
Total Quality Management (TQM)	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise Resource Planning Systems (ERP)	<input type="checkbox"/>	<input type="checkbox"/>
Quick Response Manufacturing (QRM)	<input type="checkbox"/>	<input type="checkbox"/>
Supply Chain Management (SCM)	<input type="checkbox"/>	<input type="checkbox"/>
Customer Relationship Manufacturing (CRM)	<input type="checkbox"/>	<input type="checkbox"/>
Single Minute Exchange of Die (SMED)	<input type="checkbox"/>	<input type="checkbox"/>
Rapid Manufacturing (RM)	<input type="checkbox"/>	<input type="checkbox"/>
Changes to management and structure	<input type="checkbox"/>	<input type="checkbox"/>

Q8: Please rate the level of uncertainty surrounding each of the organisation changes that your organisation has implemented, is presently implementing or is about to implement (Where 1 = low uncertainty; 2 = high uncertainty).

	1	2
Lean Systems	<input type="checkbox"/>	<input type="checkbox"/>
Six Sigma (6 σ)	<input type="checkbox"/>	<input type="checkbox"/>
Just-in-Time (JIT)	<input type="checkbox"/>	<input type="checkbox"/>
Total Quality Management (TQM)	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise Resource Planning Systems (ERP)	<input type="checkbox"/>	<input type="checkbox"/>
Quick Response Manufacturing (QRM)	<input type="checkbox"/>	<input type="checkbox"/>
Supply Chain Management (SCM)	<input type="checkbox"/>	<input type="checkbox"/>
Customer Relationship Manufacturing (CRM)	<input type="checkbox"/>	<input type="checkbox"/>
Single Minute Exchange of Die (SMED)	<input type="checkbox"/>	<input type="checkbox"/>
Rapid Manufacturing (RM)	<input type="checkbox"/>	<input type="checkbox"/>
Changes to management and structure	<input type="checkbox"/>	<input type="checkbox"/>

Q9: For those types of changes you indicated that your organisation has implemented, is presently implementing or planning to implement, what do you think were/are your organisation's reasons for implementing or planning to implement these types of organisational changes?

Q10: For those types of organisational changes you indicated that your organisation has implemented or is presently implementing, from your own account and experience please state whether the change projects have been successful or unsuccessful. Were your organisation's initial expectations met?

Q11: For those types of organisational changes you indicated that your organisation successfully implemented, please explain why you have assessed your organisation's effort to be successful.

Q12: For those types of organisational changes you indicated that your organisation did not successfully implement, please explain why you have assessed your organisation's effort to be unsuccessful.

Q13: For those types of organisational changes you indicated that your organisation did not successfully implement, please describe the typical problems your

organisation encountered when implementing these types of organisational changes. What could your organisation have done differently?

Q14: For those types of organisational changes you indicated that your organisation did not successfully implement, at what stage did your organisation have the most problems? (Where 1 = pre-implementation phase; 2 = implementation phase; 3 = post-implementation).

	1	2	3
Lean Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Six Sigma (6σ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Just-in-Time (JIT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Quality Management (TQM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise Resource Planning Systems (ERP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quick Response Manufacturing (QRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Chain Management (SCM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Relationship Manufacturing (CRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Single Minute Exchange of Die (SMED)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rapid Manufacturing (RM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to management and structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q15: Please list out the specific problems that occurred in each of the phases identified in table above.

Q16: How did your organisation resolve each of these problems highlighted in Q15?

Q17: For each of your implemented changes, please discuss how your organisation would cope:

a. If key personnel in-charge of these organisational changes leave?

b. If employees strongly resist the organisational change?

c. If your organisation runs out of funds?

d. If the organisation change causes unexpected disruptions in one of its critical functional areas during the implementation of these changes?

e. If your organisation finds out that they lack continued middle management support?

Q18: How did these unsuccessful organisational changes affect your organisation?
 What was the overall impact on your organisation's performance?

Q18a: What criteria does your organisation use in measuring the overall impact on your organisation's performance??

Q18b: Generally, how does your organisation assess its capacity and capability to maintain long-term performance?

Q18c: How often does your organisation do this?

Q19: For those types of organisational changes you indicated that your organisation did not successfully implement, how equipped do you think your organisation is now should it decide to implement similar organisational changes in the near future? (Where 1 = sufficiently equipped; 2 = barely equipped; 3 = Not equipped; 4 = Not sure).

	1	2	3	4
Lean Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Six Sigma (6σ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Just-in-Time (JIT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Quality Management (TQM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise Resource Planning Systems (ERP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Quick Response Manufacturing (QRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Chain Management (SCM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customer Relationship Manufacturing (CRM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Single Minute Exchange of Die (SMED)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rapid Manufacturing (RM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Changes to management and structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q20: For those types of organisational changes you indicated that your organisation did not successfully implement, did you have to engage external help (for example, consultants or vendors)?

APPENDIX II INTRODUCTORY PACK

SECTION 1: LETTER OF INTRODUCTION

Date

Gatekeeper's position

Company address (Line 1)

Dear Sir/Madam,

My name is Oluwatosin Otulana and I am currently a post graduate researcher in the Wolfson School of Mechanical and Manufacturing Engineering at Loughborough University, United Kingdom. My supervisors, Dr. Susan Morton and Professor Neil Burns, and I would like to invite your organisation to participate in a study on how organisations, in Nigeria, can develop in-house developmental and operational capabilities that will best ensure long term performance.

Your company's participation will require the researcher conducting administering a survey to your employees. Please note that the study will be done in line with utmost adherence to ethical guidelines and considerations. I would appreciate your willingness to participate in this study, which will enable me: (a) develop a context-specific framework that will specify peculiar actions that managers can follow in improving the long-term performance of your organisational systems, and (b) propose training strategies that will enable your employees to maximize the long-term performance.

Thank you in advance for your cooperation. If you have any concerns, please do not hesitate to call me on +447846269015 or send me an email using O.A.Otulana@lboro.ac.uk

Regards,

Oluwatosin Otulana

SECTION 2: ADDITIONAL INFORMATION SENT TO ORGANISATIONS

The University

Over the past 100 years of its existence, Loughborough University has earned and continued to maintain a place among the highly regarded top universities in the United Kingdom both on the Guardian and Sunday Times University Guide. In the 2008-2009 Sunday Times university ranking, the university won the 'University of the Year award'. Loughborough was also distinguished for its commitment to supporting international students in the 2007 awards, by winning the 'Outstanding Support for Overseas Students' Award. Likewise, for the past three consecutive years, Loughborough University has been voted the UK's 'Best Student Experience' in the prestigious Times Higher Awards.

The Research School is one of the biggest of its kind in the UK and hosts a number of leading-edge Research Centres, one of which is the Manufacturing Organisation Group. The Manufacturing Organisation Group is multidisciplinary in nature, and the research group works closely with industrial collaborators and other University Research Groups of its kind. The engineering school in which the Research Group is based has an enviable international reputation for being at the forefront of technological innovation and for maintaining extensive links with industry. It is ranked 5th in the 2008 Guardian University Subject League Tables; 7th in the 2008 UK Research Assessment Exercise in both the Times Higher and The Guardian and in the 2007 Sunday Times University Guide, the department's research was rated world class.

The Research Group

The Manufacturing Organisation Research Group carries out research in all aspects of manufacturing organisation and management including the development and operational aspects of business. The Research Strategy of the Manufacturing Organisation Group is to improve the capability of organisations to develop and deploy efficient and effective business processes and engineering systems through a

better understanding of organisational and human factors. The operational strategy of the group is to create a portfolio of complementary projects that address defined themes from a multi-disciplinary and multi-departmental perspective, thereby ensuring cross fertilisation of existing and emerging knowledge. There are more than twenty researchers within the group who are working in close collaboration with industry and other academic groups both in the United Kingdom and internationally.

Scope of the research

The research seeks to discover how organisations can sufficiently assess, build and allocate operational and developmental capabilities that will guarantee long-term performance. This is particularly difficult as organisations operate in highly multifaceted and unpredictable business domains. Complex changes, for example the introduction of Business Information Systems, are carried out to improve the performance of the business. Maintaining the performance of these types of changes can be difficult as they are mostly dependent on key people not leaving and often require other business changes which in turn could end in a complete shift in the organisation's processes, procedures and culture. This research will show how plans implemented early in the projects history can reduce the effect of disruption and result in continued high performance. Specifically, at the end of the study, participating organisations should be able to identify critical dimensions needed to enhance their capacity to swiftly generate alternatives amidst inherent complexities of organisational changes, disruptions and uncertainties in dynamic business domains.

The research plan

The research is in two stages.

- 1) The first part will be exploratory. A pilot interview, which will last no more than an hour, will be scheduled with your functional managers in order to get an overview of your organisation's current approach towards sustaining performance. The purpose of the exercise is to enable the researcher to highlight peculiar challenges

that influence the sustaining of long-term performance of your organisational systems. This will be achieved by:

- A. Understanding how your organisation attributes your capability to maintain some degree of organisation performance and/or resilience, should in case a disruption occurs.
- B. Reviewing your organisations' past experience and responses to significant organisation-wide changes and/or major setbacks e.g. the aftermath of the economic recession.
- C. Assessing and relating either the adequacy or inadequacy of the specific resources and procedures that your organisation adopts towards maintaining long-term performance.

2) The researcher would administer questionnaires to your non-managerial staffs. The questionnaire will only take a few minutes of your employees' time to complete. At the end of this stage, the researcher would present a summary of his findings. The summary is expected to highlight identified challenges, associate a measure of risk and show the extent of vulnerability of your organisation to failure if exposed to significant long term changes. All these will be used to draw a profile of the effect that each of the challenges creates on your organisation's collective awareness, adeptness and adaptive capacity in minimizing organisational performance losses. This will be achieved by:

- A. Identifying usefulness and applicability of formalised trainings programs and strategies that can help you organisations undertake future organisation-wide changes;
- B. Evaluating and classifying these training programs and/or strategies into three levels, namely strategic, supervisory and operational strategies; and
- C. Identifying the appropriate approach and necessary skill sets or critical factors needed to make all the trainings programs effective.

All data will be compiled and used to develop a self-assessing model that organisations can use in ascertaining how probable they will be able to maintain long term performance. At the very end, the results will be shared with the research

group, your organisation and other participating organisations. However, your employees' and organisation's identities will be protected as much as possible.

Thank you in advance for favourable anticipated consideration of this appeal. If you have any concerns, please do not hesitate to call me on +447846269015 or send me an email using O.A.Otulana@lboro.ac.uk

Regards,

Oluwatosin Otulana

APPENDIX III DEVELOPING THE RESEARCH CENTRAL THEMES

The procedures adopted in developing the research central themes for this study is similar to the intentional analysis steps (which was explained by Lacity and Janson 1994) or the thematic analysis technique (Attride-Stirling 2001b; Boyatzis 1998; Braun and Clarke 2006) suggested for analysing qualitative data. The first step demands that qualitative-focussed researchers describe the facts of their observed phenomenon by simply listing all the *“shared realities agreed upon by all the study participants”* (Lacity and Janson 1994). This basically entails presenting a short summary of what and how participants ascribed meanings to each of the issues raised during the pilot study interviews. So bearing this in mind, the researcher grouped all issues discussed broadly under different themes identified. Initially, a table of twenty themes under which all the issues discussed were represented was developed. Thereafter, these loose worded themes were reduced to eleven in order to reduce overlapping and double entry of the issues. The eleven new themes are referred to as the basic research themes. Finally, emergent central themes were developed so as to give a theoretical lens for the research (Jarvenpaa and Stoddard 1998; Stoddard and Jarvenpaa 1995). As it was done in Marshall (1999); *“emerging themes (or categories) were developed by studying the transcripts repeatedly and considering possible meanings and how these fitted with developing theme”*.

Identifying the shared realities agreed upon by study participants

Issues discussed by respondents	The shared realities
<ul style="list-style-type: none"> ▪ Employees’ are often reluctant to get involved ▪ Employees’ have wrong perception of changes that it would have adverse effect on them ▪ Need to relate change’s benefits to personal gains is critical ▪ A substantial percentage of previously implemented, similar, changes failed to meet anticipated benefits ▪ Employees’ experienced loss of presently enjoyed benefits 	<p>Employees’ resentment based on past experience (ERPE)</p>

<ul style="list-style-type: none"> ▪ Employees' natural inclination to resist unfavourable changes ▪ Job insecurity among employees is quite common during implementation of organisation-wide changes ▪ Employees' usually have lackadaisical behaviour until they are motivated or encouraged 	
<ul style="list-style-type: none"> ▪ Too much changes kill individuals' zeal ▪ Too frequent similar changes is not good for organisation ▪ Employees' work has become less challenging over time 	<p>Employees' non-interest whether the change is successful (PCB8)</p>
<ul style="list-style-type: none"> ▪ Employees helpful behaviour is needed ▪ Employees do not trust that the change would result in any gain and so are enthusiastic. ▪ Employees do not feel any obligation to get involved in the change once it does not directly affect them ▪ Employees are hesitant to support transformational changes because it seems to last forever. ▪ Positive behaviours have positive influence on changes ▪ Employees are more likely to offer support in instances where they would benefit 	<p>Employees' non-supportive behaviour (NSB)</p>
<ul style="list-style-type: none"> ▪ Information about organisation-wide changes must be readily available ▪ Major stakeholders should be involved right from the start of the change project ▪ Creation of dedicated teams to serve as informants ▪ The ultimate goal is to have an effective communication system in-place ▪ Regular town hall meetings ▪ Employees' are encouraged to make inputs ▪ Employees involvement or buy-in is crucial ▪ Formal channels of information source 	<p>Organisations' effort to make communication effective (OECSE)</p>

Issues discussed by respondents	The shared realities
<ul style="list-style-type: none"> ▪ Information about organisation-wide changes must be readily available ▪ Willingness of superiors to clarify and share information ▪ Easy access to information ▪ Well-established communication channels ▪ Information on change should be regularly updated 	<p>Level of employees' awareness (LEA)</p>
<ul style="list-style-type: none"> ▪ Employees must be allowed to express their displeasures ▪ Employees should be encouraged to put across contrary views regarding issues relating to the change ▪ Continuous feedback from employees should be encouraged ▪ Employees' values and rights are promoted 	<p>Opportunity for employees to freely express themselves (OEFE)</p>
<ul style="list-style-type: none"> ▪ Extent to which employees feel attached to their organisations is low due to too frequent changes ▪ Employees' preference for their organisation over others ▪ Employees are not proud to work for their organisations ▪ Employees' belief that they owe their organisation the duty to put in their best ▪ Employees' indifference to whether the company can still meet its functional needs ▪ Number of employees actively seeking employments in similar organisations 	<p>Employees' non-allegiance to their organisations (ENA)</p>
<ul style="list-style-type: none"> ▪ Freedom to challenge established processes of doing things ▪ Prioritising organisational goals over personal goals ▪ Liberty to make contribution even if the contribution is unpopular ▪ Employees' ability to state that organisation-wide changes is not needed even when management says is ▪ Ability to follow through on all tasks 	<p>Employees' sincerity (ES)</p>

Issues discussed by respondents	The shared realities
<ul style="list-style-type: none"> ▪ Employees do lip service ▪ Employees are not sincere enough to remain dedicated when not supervised 	
<ul style="list-style-type: none"> ▪ Belief that similar organisations cannot offer better packages than their organisations ▪ Belief that their organisation is one of the best of its kind ▪ Belief that their organisation is in no way different from other similar organisations ▪ Continued show of affection for their organisation despite evidence that other organisations can offer better package ▪ Great motivation from the fact that they work for their organisations 	<p>Employees' continued belief in their organisations (ECB)</p>
<ul style="list-style-type: none"> ▪ Willingness to put in extra effort to get their work done ▪ Pride of been associated with their organisations ▪ Belief that their values and the organisation's value are similar ▪ Employees heightened concern for their organisations' fate ▪ Willingness to continue working for the organisation even if placed on a lesser role or demoted ▪ Employees' main goal is have a job irrespective of what it is ▪ Great motivation from the fact that they work for their organisations 	<p>Employees' affective commitment towards their organisations (AC)</p>
<ul style="list-style-type: none"> ▪ Provision of adequate training as and when needed ▪ Existence of a learning culture ▪ Encouragement of knowledge transfer and sharing ▪ Procedures that aid learning from failure and past errors ▪ Employees' willingness and desire to learn new things ▪ Employees' are coached on how to do the right things ▪ Provision of adequate support and tools needed to do work ▪ Existence of subject matter experts' and help forums ▪ Existence of proper documentation on change projects 	<p>Learning culture (LC)</p>

Issues discussed by respondents	The shared realities
<ul style="list-style-type: none"> ▪ Evidence that management's past success inspires their subordinates ▪ Positive precepts of leaders' intent is a catalyst ▪ Leaders' ability to promote equity, fairness and unbiased contributions. ▪ Superiors' ability to deliver on commitments ▪ Continuance of policies ▪ Trust for superiors ▪ Superiors' show of empathy ▪ Respect for subordinates ▪ Encouragement of teamwork ▪ Superiors' ability to be an inspiration to his subordinates 	<p style="text-align: center;">Belief in leadership (BL)</p>
<ul style="list-style-type: none"> ▪ Roles and responsibilities should be clearly marked ▪ Knowledge and empowerment of employees to work ▪ Reporting lines must be clearly defined ▪ Perceived support of top management is essential ▪ Shared sense of purpose amongst team is needed ▪ Periodic meetings so as to review and deliberate on employees' roles ▪ Goal setting and fair performance reviews ▪ Collaboration among teams across organisation ▪ Not too excessive workloads per employee 	<p style="text-align: center;">Delegation of responsibilities (DR)</p>
<ul style="list-style-type: none"> ▪ Provision of adequate support and tools ▪ Equal right to access needed resources ▪ Employees' are coached on how to do the right things ▪ Availability of needed skills and resources ▪ Adequate support from team members ▪ Availability of useful information ▪ Knowledge and proficiency in use of tools critical to one's work 	<p style="text-align: center;">Access to resources (ACR)</p>

Issues discussed by respondents	The shared realities
<ul style="list-style-type: none"> ▪ Ability to perform better as result of increased access to resources ▪ Support from more knowledgeable persons makes the job easier ▪ Having mentors in organisations is important ▪ Access to rightful information minimises employees' unnecessary agitation and resistance ▪ Consistency pays off when using the right tools 	Benefits of resources (BR)
<ul style="list-style-type: none"> ▪ Freedom to choose how to best to work without compromising standard protocols ▪ Freedom to choose which tools to work with ▪ Superiors' ability to properly match individuals to roles 	Fair allocation of resources (FAR)
<ul style="list-style-type: none"> ▪ Support from more knowledgeable persons makes the job easier ▪ Support from more knowledgeable persons makes the job easier ▪ Provision of trainings and development programs ▪ Improved work climate ▪ Collective effort in rectifying problems ▪ There is always someone willing to help ▪ Extension of job benefits to family members 	Provision of social support (PSS)
<ul style="list-style-type: none"> ▪ Provision of incentives and rewards ▪ Health plans and provisions for employees ▪ Extension of job benefits to family members ▪ Job satisfaction assessments ▪ Improved work climate ▪ Encouragement of positive thinking ▪ Development of self-adjusting strategies ▪ Use of culture, faith or religion to suppress unpleasant moments. 	Use of coping strategies (CS)

Issues discussed by respondents	The shared realities
<ul style="list-style-type: none"> ▪ Situational appraisals should be ongoing ▪ Management of risks is a must ▪ Formulation of disaster recovery plans is mandatory ▪ Formal hazards identification procedures helps ▪ Reviews, root cause, near miss analyses should be done at the end of every project ▪ Impact assessment reviews 	<p style="text-align: center;">Impact assessment (IA)</p>
<ul style="list-style-type: none"> ▪ Existence of Contingency plans ▪ Formal handover routines ▪ Roles and responsibilities should be overlapped ▪ A synergy of experts should be created ▪ Needs assessments before every project is good ▪ Existence of business continuity plans ▪ Everyone should be trained to perform one another's job 	<p style="text-align: center;">Scenario planning (SP)</p>

Developing the research basic themes

The shared realities	Identifying underlying basic themes
ERPE NSB PCB8	Employees' attitude based on perceived change benefits (PCB)
OECSE LEA OEFE	Effective communication (EC)
ENA ES ECB	Employees' sincerity (ES)
AC	Affective commitment (AC)
LC	Learning culture (LC)
BL DR	Leadership style and quality (LSQ)
ACR BR FAR	Access to resources (AR)
PSS	Provision of social support (PSS)
CS	Use of stress coping style (CS)
IA	Impact assessment (IA)
SP	Scenario planning (SP)

Developing the research central themes

Operationalising of research central themes involves defining the research variables that cannot be observed directly; in terms of attributes and constructs that the researcher deems appropriate and characteristic of the research variables under study (Byrne 2006). In other words, operationalising of research themes entails distinguishing, delineating and expatiating upon how the examined data and the research variables relate to the research's unobserved data. As shown in the table below, the basic themes are aggregated so as to form the research central themes.

The research central themes

Basic themes	Research central themes
PCB EC EL AC	Employees' readiness to support organisation-wide changes (ERSC)
LC LSQ AR	Targeted human development organisational adaptive capabilities (OAC)
PSS CS	Provision of both individualised and social support (PRIS)
IA SP	Organisational resilience (OR)

Company A

Company A was incorporated in 1988. With staff strength of 518, it is the largest organisation among the case study organisations. The company's core areas of operation in the oil and gas industry basically entail exploration and production of underdeveloped proven crude oil reserves. From a production of 980 barrels of crude oil per day in the early 1990s, the company's total fields' production now exceeds 24,000 barrels. With partnership and operatorship interests in four oil mining licenses in four onshore assets and oil nine prospecting licenses, the company is unarguably one of the major indigenous oil companies in Nigeria. The management team is made up of the Managing Director and five Executive Directors (i.e. that of, Direct Asset operations, Joint Venture Operations, Engineering & Technical Services, Services and Finance). As the company continues to expand, one of its main challenges lies extensively in knowledge management and transfer. Three-quarters of its workforce have been predicted to retire in the next 3-7 years. Because of this, the company embarked on mass employment recently. Subsequently, the company has undergone and is undergoing several organisational changes – all because they want to sustain their level of performance. Another challenge the company is facing lies in their desire to accelerate the development of their new recruits into becoming effective teams that can work proficiently, and might as well be confident of effectively handling matters that might arise in the course of their work.

Company B

Company B is a medium-sized company, with 114 employees. It was set up in 1988 with the aspiration of offering seismic data acquisition, seismic data processing, reservoir engineering services, and data storage and management services to oil producing companies. Since its inception in 1988, as one of the subsidiaries of a major state-managed corporation, the company has competed successfully with reputable international service companies operating in the in the oil and gas sector. Over the years, the company has in times past entered into joint venture

relationships with world-renowned major oil and gas companies. With rapid advancement in technology and increased competition in their market, the company is working hard to add to the portfolio of services it is presently rendering to the oil industry. As such, the long-term objective of the company is to be, on its own, the ultimate centre for the provision of Geophysical and Petroleum Engineering services in the world oil and gas industry. One way is innovation, while at the same ensuring that the company's present performance level is maintained.

Company C

The company is one of the largest providers of clinical services in the south western part of Nigeria. The first clinic was established in 1979, and it had two medical directors who also acted as the managing partners. The clinic has since grown to become part of a network group of health care providers. Company C is a big clinic, and holds substantial interests in three other clinics, in the group of over 250 clinics. The group is accredited by the National Health Insurance Scheme (NHIS) as a national Health Maintenance Organisation (HMO) in Nigeria. Although, there are over 1000 people that work for the group, only 41 of this lot are direct employees of company C. The others are employees of their forged partners. Company C's mission statement has always been 'to deliver the highest possible level of healthcare at the lowest possible price' and this they have done for more than 30 years.

Company D

Company D was first and foremost incorporated in 2001 with the sole aim of selling well-used automobiles to the Nigerian populace. It is owned by institutional investors and entrepreneurs with over 50 years-combined experience in the Automobile industry. After an aggressive and impressive start, the company soon expanded and opened opening outlets in 2 major cities across Nigeria. Later on, the company in addition to selling well-used cars started dealing in brand new cars, and in a short time had almost all the government establishments, major corporations, and privileged individuals as their clients. In 2003, the company acquired a dealership partnership with Toyota. Similarly, in 2005 and 2007 the company became official

dealers for Mercedes Benz and BMW respectively. As a result, the company is one of the biggest automobile companies in Nigeria engaged in sales and leasing. Recently, less than 2 years ago (i.e. from 2010), the company opened its multi-million naira workshop in Lagos to render after-sale services to its customer, and a bit of re-assembling works. According to the chief executive officer, the main test awaiting the company is how to successfully operate the workshop to the best possible standards while still making the services affordable. As a chunk of the company's resources has been directed to the workshop, how well operations are run will greatly affect the company's performance. Hence, the research would be handy.

Company E

Company E is a business consulting firm that specialises in business advisory services such as technology and process improvement, people and change management, personnel recruitment and training, talent management and clerical staff outsourcing. Presently, the company has 53 staff – 31 of whom work as permanent staff and 22 are outsourced (contract) staff. The firm was formed in 1992 by three business consultants, who all resigned from Accenture Nigeria. However, since its establishment, the firm has experienced a couple of buy-outs. Out of the original three managing partners that started the firm, only still remains as one of the current managing partners. Over the years, the company has seen both good and bad successes but more of good success in recent times. As part of their strategic plan for growth, the company is planning to open an office branch in Abuja. The company's ambition, for the next 3 years, is to remain competitive by adapting to the changing needs of their clients and staff. The top management believe that through this the company can successfully reposition. Also, the company they conceive would then be in a better instance to successfully adopt more value-centred approaches to resolving their clients' current and future needs. For these reasons, the company hopes that the research will assist them to develop specific capabilities that will be beneficial to them in their quest to not only sustain their level of success but also enhance their capacity to operate successfully despite any upcoming setbacks.

Company F

The firm was incorporated in 2005 as a result of a thriving merger among three finance houses. Each of the merging parties had been in existence for a minimum of 10 years and, each were highly regarded. Expectedly, the now-bigger firm boasts of an enviable list of business associates and clientele to show for its achievements. The company has about 90 staff across its offices. With two offices in Nigeria and a business outlet in London, company F is certainly one of the top three leading stock broking firms in Nigeria. The firm is involved in investment banking, securities trading, asset management and investment research. Each of these functions is backed by a diverse team headed by the Managing Director and seven unit heads. Despite its demonstrable previous records of accomplishments, the firm's performance indices have been way below what it obtained before the global downturn of 2009. By way of this, the firm is taking strenuous steps to improve performance in all its business divisions.

Company G

Company G is a private (family-managed) law firm that was established in 1976 and currently has three partners, six associates and four lawyers. All the three partners have a PhD degree in their various specialisations, and among them have no less than 20 years of hands-on litigation experience, teaching and practice. The principal partner since its commencement is the first Nigerian professor of business law. The firm is divided into several departments that offer a full range of legal services and advice regarding international banking, corporate, real estate, mergers and acquisitions, insurance and maritime law. One of the firm's guiding business ethics is premised on recruiting only the best individuals with sound academic trainings and unblemished years of practice. The downside of this is that the firm has a high staff turnover. A large percentage of their associates either end up forming their own law firms or go on to work for other firms. The company was chosen because it has over the years grown to be a recognised brand notably associated with long-term performance in the legal sector.

Company H

Company H is also a private (family-managed) law firm. The firm was established in 1967 by one of the first legal icons of Nigeria. The man, who doubles as the Head of Chambers and the Senior Partner, was a one-time Attorney General and Commissioner for Justice of one the defunct states in Nigeria between 1975-1976. Over the years, the firm has garnered an impressive record of providing remarkable and specialised services in the areas commercial dispute resolution, capital market law and practice, corporate finance law, corporate structuring and restructuring and real estate and probate. The day-to-day operation of the firm is managed by the founder's son, who is also a Senior Advocate of Nigeria. The firm bases its successes on their ability to provide solutions and excellent legal services to all their clients, every time. Based on the firm's track records, doing research on how organisations sustain long-term performance in Company H is exemplary as an analysis of the firm will greatly highlight whether the emergent themes are indeed critical factors needed.

Company I

The last case study company, I, is a newspaper company that produces paid-for quarterly local newspaper. Founded in 2006, the company has one editor-in-chief, two editors (in charge of community news and developments and national news and events relating to the town and surrounding towns where the newspaper company is based) and eleven columnists and/or reporters (three of these are permanent while the remaining are freelance). Each year, sales have continuously increased; the company's newspaper has sold more than 8,324 copies. The company is a classic example of a small enterprise that is doing quite well.

APPENDIX V DESIGNING THE QUESTIONNAIRE

Section A: The questionnaire administered

Dear Respondent,

I would like to invite you to participate in this survey.

My name is Oluwatosin Otulana and I am a PhD student at Loughborough University, in the UK. As part of my PhD study, I am conducting a survey to help assess and appraise how organisations operating in Nigeria maintain long-term performance, and work towards being resilient. Specifically, I have developed a questionnaire to help me do this. The questionnaire is grouped into six main sections. Each section asks you to show 'how you observe things in your organisation'. There is no right or wrong answer to any of the questions asked in the questionnaire.

Please note: all sections vary so please take time to read the instructions for each section. Completing this questionnaire will help me to develop a framework of guidance that managers will be able to follow to improve the long-term performance of the organisation's systems. I will also propose training strategies that will assist employees to maximize long-term performance. Therefore, I will be grateful if you would answer all the questions.

Your answers will be completely confidential. In addition, the results of the survey will be aggregated and fed back to your organisation in summary format, so no one will be able to link you to your responses. If you have any questions about the administration of the survey, please do not hesitate to contact me on 08023214770 or via email to O.A.Otulana@lboro.ac.uk

Thank you in advance for your participation. It is greatly appreciated..



Section 1: Background Information

Please tick the one that it is **most applicable** to you

a) Gender

Male Female

b) Which of the following is your age group?

Under 25 years 26 – 30 years
31 – 40 years 41 – 50 years
Over 50 years

c) I have been working in this present organisation for:

0 – 2 years 3 – 5 years
6 – 10 years 11 – 19 years
over 20 years

d) My organisation is:

Privately owned Government-owned

e) The number of employees in my organisation fall between:

Under 25 26 – 50
51 – 100 100 – 149
Over 150

f) Which of the following is your highest level of education or its equivalent?

Senior secondary school certificate
Higher National Diploma
Bachelor Degree
Masters Degree
Doctoral degree

Section 2: Employees' readiness to support organisation-wide changes

Please circle the response that best rates **how well** each of the statements below describes you.

PART A

	Not at all	A little bit	Moderately	Quite a bit	Very much
In general, when I hear that management wants to embark on organisation-wide changes:					
I do not trust that such changes will make things better for me	1	2	3	4	5
I fear the unknown	1	2	3	4	5
I imagine that I might lose some of the benefits that I presently enjoy	1	2	3	4	5
I do not feel any obligation to support such change	1	2	3	4	5
I will silently resent it once I know it would affect me negatively	1	2	3	4	5
I might lose my job if I oppose certain changes being made by management	1	2	3	4	5
I am often reluctant to support the change	1	2	3	4	5
I no longer find my work as interesting / challenging	1	2	3	4	5
I care less if such changes are successful	1	2	3	4	5

PART B

	Not at all	A little bit	Moderately	Quite a bit	Very much
I feel the communication system in my organisation is effective	1	2	3	4	5
My immediate boss is always willing to clarify and share information	1	2	3	4	5
At every point in time, I am aware of the events that happen in the organisation	1	2	3	4	5
In my organisation, there is easy access to information	1	2	3	4	5
I am free to express my disapproval without being victimised	1	2	3	4	5
My organisation continuously works to make the communication style effective	1	2	3	4	5
I am allowed to make input to key activities and issues involved in managing my work	1	2	3	4	5
In my organisation, management have periodic meetings with employees	1	2	3	4	5
In my organisation, employees are involved in decision making	1	2	3	4	5

PART C

	Not at all	A little bit	Moderately	Quite a bit	Very much
I think some changes being done in my organisation now are not necessary	1	2	3	4	5
I think organisational changes reduce predictability in an organisation	1	2	3	4	5
I feel very little attachment to this organisation	1	2	3	4	5
This organisation is no different from other similar organisations	1	2	3	4	5
For the same job I do in this company, I will definitely be paid more in another organisation	1	2	3	4	5
I do not mind working for this organisation till I retire	1	2	3	4	5
Often, I find it hard to understand the reasons for some organisational changes	1	2	3	4	5
Most times, I regret working in this organisation	1	2	3	4	5
If I see things differently as my manager does, I would rather not speak about it	1	2	3	4	5
Often times, I first hear of organisational changes being done through colleagues	1	2	3	4	5

PART D

	Not at all	A little bit	Moderately	Quite a bit	Very much
I am willing to put in a great deal of effort beyond that normally	1	2	3	4	5
I talk up this organisation to my friends as a great organisation to work for	1	2	3	4	5
I would accept almost any type of job assignment in order to keep working for this organisation	1	2	3	4	5
I find that my values and the organisation's values are very similar	1	2	3	4	5
I am proud to tell others that I am part of this organisation	1	2	3	4	5
This organisation really inspires the very best in me in the way of job performance	1	2	3	4	5
I am extremely glad that I chose this organisation to work for, over others I was considering at the time I joined	1	2	3	4	5
I really care about the fate of this organisation	1	2	3	4	5
For me this is the best of all possible organisations for which to work	1	2	3	4	5

Section 3: Organisational adaptive capacity

This set of questions addresses how organisational adaptive capacity impact on organisations' ability to maintain long-term performance. Please circle the answer that best mark how true you think each of the following statement is.

PART A

	Rarely true	Occasionally true	Neither true nor untrue	Often true	Always true
In my organisation, employees are open to learning from one another	1	2	3	4	5
I have access to opportunities that will assist me to develop skills needed to best do my work	1	2	3	4	5
In my organisation, individuals are encouraged to explore new ways of solving problems	1	2	3	4	5
In my organisation, people are trained to cope with work challenges	1	2	3	4	5
My manager provides me will adequate support and required tools to work with	1	2	3	4	5
In my organisation, individuals are coached to do right things	1	2	3	4	5
In my organisation, we are trained to manage risks	1	2	3	4	5

PART B

	Rarely true	Occasionally true	Neither true nor untrue	Often true	Always true
My manager always delivers on commitments	1	2	3	4	5
The senior staff in my organisation can fulfil promises	1	2	3	4	5
My manager is a trustworthy person	1	2	3	4	5
I know what is expected of me in most jobs I perform	1	2	3	4	5
My work entails a lot of collaboration	1	2	3	4	5
Everyone has clearly defined roles	1	2	3	4	5
My manager is more focussed on achieving corporate goals than personal goals	1	2	3	4	5
My manager encourages teamwork	1	2	3	4	5
My manager makes substantial contribution towards helping me to achieve my goals	1	2	3	4	5
In my team, we share the same sense of purpose	1	2	3	4	5
My manager ensures that employees' dissatisfaction is resolved quickly	1	2	3	4	5

PART C

	Rarely true	Occasionally true	Neither true nor untrue	Often true	Always true
I would perform better if I have access to all the resources I need to work properly	1	2	3	4	5
My manager ensures we have the required tools and skills for doing our jobs	1	2	3	4	5
The senior staffs in my organisation provide us with the required trainings to do our work	1	2	3	4	5
In my team, we have equal opportunity to use the available resources that we need to work	1	2	3	4	5
Consistency pays off especially when working with the right tools	1	2	3	4	5
I have full confidence in the ability of my team to finish all ongoing projects when we have the right tools	1	2	3	4	5
My manager goes over things again just to make sure we have the right resources to work with	1	2	3	4	5
In my team, we are able to perform our assigned roles	1	2	3	4	5
I am free to choose the resources I need best to do my work	1	2	3	4	5
In my organisation, people's skills are well-matched to their work	1	2	3	4	5

Section 4: Provision and use of stress-coping mechanisms

This section examines the provision of social support to individual employees and the existence of coping strategies. Using the five-point scale below, please circle a response that best represents the extent to which **you agree** each of the statements below.

PART A

	Strongly disagree	Agree	Neither agree nor disagree	Agree	Strongly agree
My organisation assists employees to solve personal problems	1	2	3	4	5
I have all I need to handle unpleasant occurrences at work	1	2	3	4	5
In my team, we often work together to rectify mistakes irrespective of who caused it	1	2	3	4	5
In my organisation, individuals rally round to help those who need help	1	2	3	4	5
Knowing that someone can assist me motivates me to put in my best at work	1	2	3	4	5

PART B

	Strongly disagree	Agree	Neither agree nor disagree	Agree	Strongly agree
I view change as an opportunity to improve myself	1	2	3	4	5
When I am faced with obstacles, I remember times I faced similar obstacles	1	2	3	4	5
Over time, I have devised my own way of dealing with challenges	1	2	3	4	5

Section 5: Existence of systems' recovery strategies

This last section attempts to draw attention to an assumption that less resilient organisations hardly use systems' recovery strategies. Please answer either **TRUE or FALSE** to the following questions below

PART A

	TRUE	FALSE
In my team, we often do impact assessment drills before starting a major project	<input type="checkbox"/>	<input type="checkbox"/>
We often have an alternative plan for most of job plans	<input type="checkbox"/>	<input type="checkbox"/>
We regularly do thorough analysis of situations before starting a task	<input type="checkbox"/>	<input type="checkbox"/>
My organisation engages in business continuity planning	<input type="checkbox"/>	<input type="checkbox"/>
My manager uses a formal approach through which economic decisions of any kind are justified	<input type="checkbox"/>	<input type="checkbox"/>
In my team, we tend to imagine various scenarios where we could have acted differently	<input type="checkbox"/>	<input type="checkbox"/>
I am aware that my organisation has a contingency plan for managing unexpected events.	<input type="checkbox"/>	<input type="checkbox"/>
I can deal with whatever comes my way even if people in my team leave the organisation	<input type="checkbox"/>	<input type="checkbox"/>
In general, everyone in my team is trained to perform each other's jobs	<input type="checkbox"/>	<input type="checkbox"/>

*** END ***

THANK YOU.

APPENDIX VI PROFILE OF SENIOR STAFF INTERVIEWED

Organisations	Persons interviewed
Case A	Executive Director, Services Manager, Joint Venture Operations (JVO) Manager, Upstream ventures Assistant manager, Downstream ventures Assistant manager, Gas
Case B	Executive Director, Engineering and Technical Services Projects and Operations Integrity team (POI) Manager Project Engineer I, POI Project Engineer II, POI Manager, Information Technology Manager, Seismic Services
Case C	Managing Partner I Managing Partner II Chief Radiologist Pharmacist Matron Finance Manager
Case D	Managing Director Sales Manager Workshop Manager Workshop supervisor
Case E	Managing director Manager, Business Advisory Services Senior Associate, Audit and Assurance
Case F	Managing Director Financial controller Manager, Asset Management

Organisations	Persons interviewed
Case G	Managing Partner Head, Contracts Finance Manager
Case H	Managing Partner Head, Dispute Resolution Senior Associate, Capital Market Head, Mergers and Acquisitions
Case I	Editor-in-chief

